MT. ROBSON PROVINCIAL PARK

including
Mt. Terry Fox Park and Rearguard Falls

MASTER PLAN BACKGROUND REPORT

MINISTRY OF PARKS

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91-01675/

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PREFACE AND ACKNOWLEDGEMENTS

This report contains background information for public review of plans for Mt. Robson Provincial Park, Mt. Terry Fox Park and Rearguard Falls. It consolidates information needed by the Ministry of Parks to prepare the Master Plans for these parks.

The information was collected from previous studies, field assessment and by interviewing government staff. We would like to acknowledge these individuals for their helpful information and assistance:

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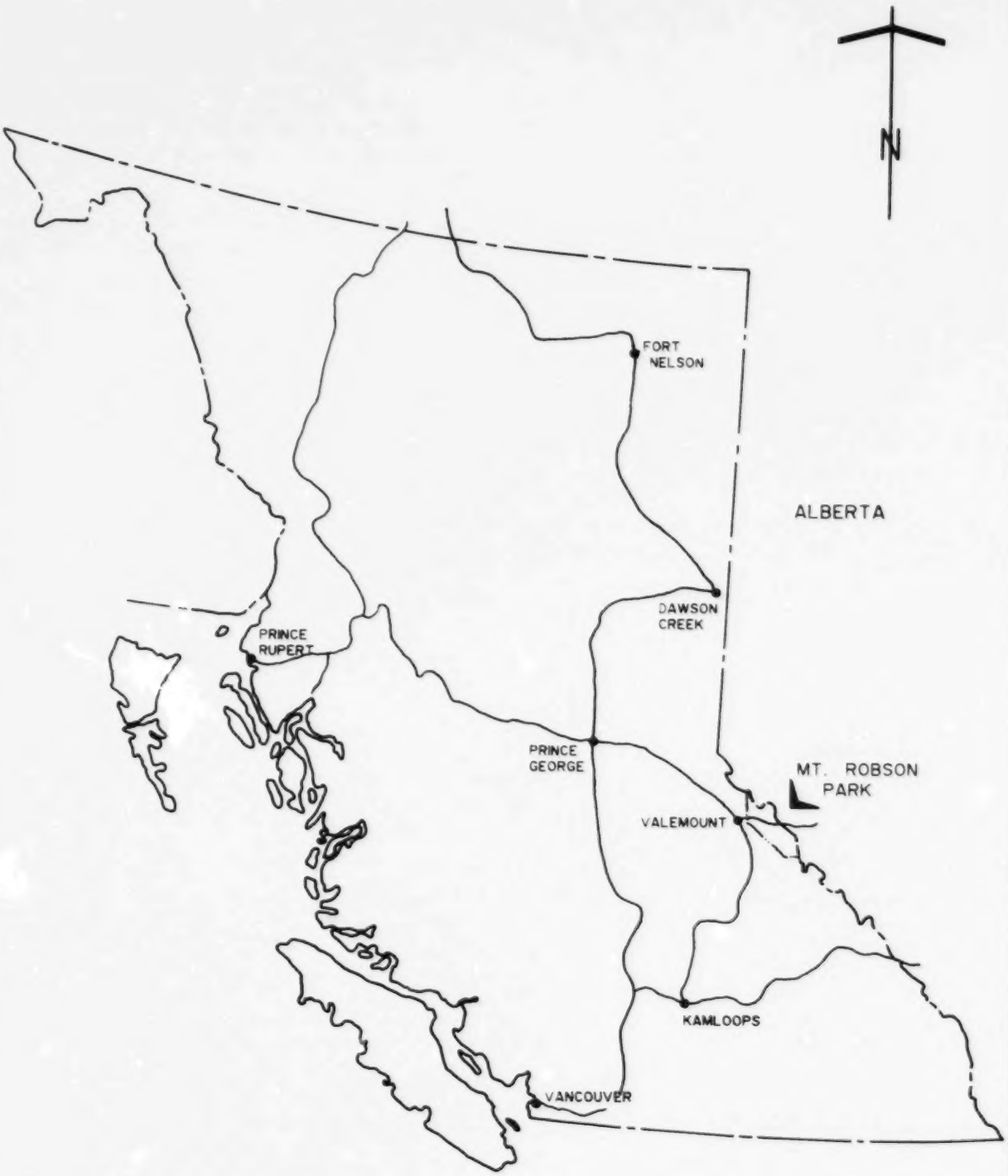


MOUNT ROBSON PROVINCIAL PARK

PARK LOCATION — MAP No. 1

SCALE : 1" = 125 miles

1.0 INTRODUCTION

"On every side the snowy heads of mighty hills crowded round, whilst, immediately behind us, a giant among giants, and immeasurably supreme, rose Robson's Peak." (Milton and Cheadle, 1865)

Mount Robson Provincial Park lies in the northern Rocky Mountains on the Alberta-British Columbia border, next to Jasper National Park. Highway #16 and the Canadian National Railway enter the park at historic Yellowhead Pass and go through the park in the Fraser River valley. In 1913, the British Columbia government created the 217,000 hectare park, the second provincial park in the province, to protect the mountains in the vicinity of Mount Robson for public enjoyment.

Mount Robson, at 3954 metres, is the highest peak in the Canadian Rockies. It rises dramatically from the valley bottom to an icy summit, towering above all other peaks. Called "The Monarch of the Canadian Rockies", Mount Robson is the guardian of the park.

1.1 REGIONAL AND PROVINCIAL CONTEXT

Mount Robson Park has long been recognized in the province for its important conservation and outdoor recreation role. Its establishment, just six years following the creation of Jasper National Park, was a natural extension to protected lands in the splendid central and southern ranges of the Canadian Rocky Mountains. Mount Robson is one of British Columbia's best known parks. Opportunities for outdoor recreation here are highly prized by people in the region, the province, Canada, and internationally. The "Monarch of the Canadian Rockies" is recognized world-wide as the representative peak of the Canadian Rocky Mountains.

Conservation Role

Mount Robson Park is a key part of the B.C. Park system. Its location next to the World Heritage sites of Jasper and Banff National Parks, and now its own nomination for this global designation, lend it wide recognition as a conserved natural area.

The park provides full representation of the North Continental Ranges Landscape. With the exception of a small part of the Robson Valley, a complete cross-section of the Rocky Mountains is presented in Jasper and Mount Robson Parks. Within this cross-section, the park protects a complex mountain ecosystem represented by four biogeoclimatic zones, including vegetation and wildlife.

Recreation Role

Mount Robson Provincial Park has attractive landscape features and recreation opportunities capable of satisfying most visitors. It serves an important tourism role for travellers on the Yellowhead Highway, and is also a destination mountain wilderness park for visitors and residents. Mount Robson's recreation role is closely linked to its location next to the internationally known Banff and Jasper National Parks. As the highest peak in the Rockies, its enduring attraction as a climbing destination is assured.

Existing recreation zones in the park can be described as:

TABLE #1 EXISTING RECREATION ZONES IN MOUNT ROBSON PARK

Intensive Recreation:

Road accessible developments such as the Visitor Centre, campgrounds, and viewpoints. Variety of services and amenities. Greatest number of visitors.

Natural Environment:

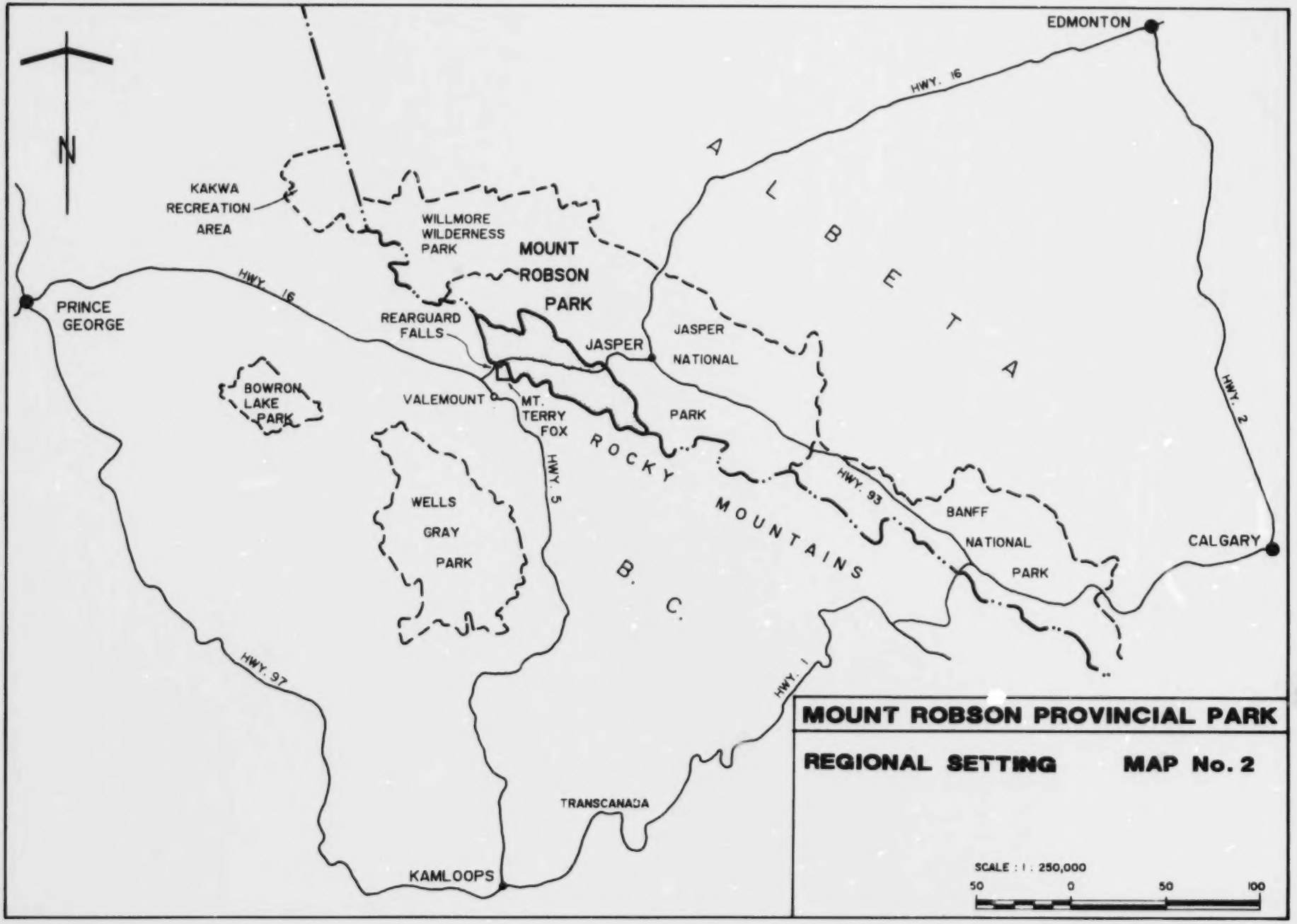
Unroaded areas, but highly accessible from nearby roads, with obvious natural characteristics but lacking wilderness atmosphere, eg. the Kinney Lake trail, or Yellowhead Lake. High number of visitors.

Wilderness:

Some degree of backcountry management may be evident in some area, for example shelters and improved trails. The vicinity of Berg Lake offers such an experience. Moderate to high number of visitors are concentrated at Berg Lake.

Rugged, challenging recreation opportunities also exist in a setting totally without facilities or routine patrol, eg. the Icefall Lake or Moose River and Moose Pass area. Relatively few visitors.

Kinney Lake lies at the threshold of the Mount Robson wilderness.


N
EDMONTON
HWY. 16
ALBERTA
KAKWA
RECREATION
AREA
WILLMORE
WILDERNESS
PARK
MOUNT
ROBSON
PARK
HWY. 16
PRINCE
GEORGE
REARGUARD
FALLS
JASPER
JASPER
NATIONAL
PARK
HWY. 2
BOWRON
LAKE
PARK
VALEMOUNT
MT.
TERRY
FOX
HWY. 5
ROCKY
MOUNTAINS
HWY. 93
BANFF
NATIONAL
PARK
CALGARY
WELLS
GRAY
PARK
B. C.
HWY. 97
HWY. 1
TRANSCANADA
KAMLOOPS
MOUNT ROBSON PROVINCIAL PARK
REGIONAL SETTING
MAP No. 2
SCALE : 1 : 250,000
50
0
50
100

2.0 NATURAL RESOURCES

2.1 CLIMATE

Mount Robson Park has many of the attributes of a continental climate, with wide seasonal temperature contrasts and severe winters. The regional climate is strongly influenced by the predominant westerly air flow that moderates this continental climate and creates a humid continental climate.

The moist west slope of the Rockies is moderated by the rainshadow effect of mountain ranges to the west, especially the Premier Range. As a result, the Valemount to McBride portion of the Rocky Mountain Trench adjacent to Mount Robson Park is drier than areas to the north and south. This regional influence extends eastward into the park (Blood and Anweiler, 1990).

Short, cool summers are followed by long, cold winters. Snowfall is abundant in the valley. During the short peak recreation season of June through August, daytime temperatures hover about 12-15 C., predominated by showery, overcast days. Yet periods of high pressure often produce brilliantly sunny, hot weather adding to the grandeur of the park. Local people suggest the first two weeks of August are often best. Autumn weather can be pleasant. Reverend George M. Grant of Sir Sanford Fleming's 1872 expedition captured a romantic 19th century view of weather conditions near Mount Robson:

> *...the clouds that had been floating over the tops of the hills all day, and obscuring the lofty glacier on Robson's Peak, began to close in and empty themselves. Looking west down the valley of the Fraser the narrow pass suddenly filled with rolling billows of mist. On they came, curling over the rocky summits, rolling down to the forests, enveloping everything in their fleecy mantles. Out of them came great gusts of wind that nearly blew away our fires and tents; and after the gusts, the rain in smart showers. Once or twice the sun broke through, revealing the hill sides, all their autumn tints fresh and glistening after the rain, and the line of their summits near and bold against the sky; all, except Robson's Peak which showed its huge shoulders covered with masses of snow, but on whose high head clouds ever rested.*

Selected climate statistics for Robson Ranch are given in Table #2. These represent valley bottom sites in the highway corridor. Ministry of Environment data for 1982 suggest that snowfall decreases eastward from Red Pass, and is lowest in the Yellowhead Lake Area. Red Pass is considered a climate divide, separating heavier precipitation areas to the west from the eastern part of the Yellowhead corridor. On flat ground in valley bottom sites, snow depth in the Red PassMoose Marsh area normally exceeds one meter in late winter (Blood and Anweiler, 1990).

When the factor of slope aspect is omitted, snow depth and duration increase with elevation. Variations in snow depth and duration associated with east-west rainshadow trends, aspect, and elevation together strongly influence ungulate distribution and abundance in the highway corridor in winter (Blood and Anweiler, 1990). Snow avalanches are also common on steep slopes along the corridor, as shown by the many slide-paths.

Table #2 Climate Statistics for Robson Ranch

Temperature

Mean annual:	2.8' C
Warmest ninth:	15.2' C (July)
Coldest month:	12.6' C (Jan.)

Precipitation

Mean annual:	630.3 mm
Mean annual snowfall:	234.8 an
Driest month:	May
Wettest month:	December

(data from Maidinger et al. 1984)

2.2 HYDROLOGY

The upper Fraser River and its tributaries drain Mount Robson Park. These rivers flow freely, with excellent water quality. Major tributaries, both flowing north to south, are the Robson and Moose Rivers. The Fraser River has a fairly low gradient and is sinuous, especially between Moose Lake and Ghita Creek. Tributary streams, in contrast, are mostly turbulent and have straight courses. The annual May or June spring flood which accompanies the alpine/subalpine snowmelt is the major hydrological event in the park (Farley 1979).

Moose Lake, 11. 5 km long and up to 2km wide, is a major water body beside Highway 16. Yellowhead Lake, also on the valley floor, is about 4 km long and 0. 5 km wide. Whitney Lake, near Yellowhead Lake, and Portal Lake at Yellowhead Pass are small but have high recreational value for fishing and shoreline walking. These lakes have rocky, moderately steep shorelines with little aquatic vegetation. All lakes are ice-covered in winter.

Attractive alpine and sub-alpine lakes, such as Kinney and Berg Lakes in the Robson Valley with beautiful turquoise and blue colour, are found throughout the park. Jade and Icefall Lakes are the next largest, near the headwaters of the Fraser River.

The only significant wetland in the Fraser River corridor is Moose Marsh at the east end of Moose Lake, described in detail by Mol (1989). Wetlands accessible by highway are uncommon in the Four Mountain Parks, and Moose Marsh stands out for this reason. Lush alpine meadows in the park thrive in moist, poorly drained sites above 1,500 metres in elevation.

2.3 PHYSIOGRAPHY

The most visible topographic feature in the park, next to Mt. Robson itself, is the U-shaped valley of the Fraser River, which has a northwest-southeast trend for most of its distance within the park. Parallel mountain ridges and peaks run on this axis in the park with the Fraser River valley separating the ranges. The continuity of valley slopes paralleling the corridor is interrupted by the V-shaped valleys of many streams entering from the north and south. Peaks bounding the corridor, with the exception of Mt. Robson, range between 2,500 and 2,750 m.

2.3.1 Geology

Mount Robson Park lies entirely within the North Continental Ranges of the Canadian Rocky Mountains. Its area incorporates the headwaters of the Fraser River drainage basin, while the north boundary of the park forms a portion of the Continental Divide. The park protects a representative example of the North Continental Ranges Landscape of the Rocky Mountains Natural Region.

Underlain by Paleozoic and older sediments, the Rocky Mountains are mainly limestone, quartzite or related rocks, with some sandstones and shales. All strata is subjected to thrust faulting and gentle folding, the results of which are visible as steeply tilted and layered rock ridges.

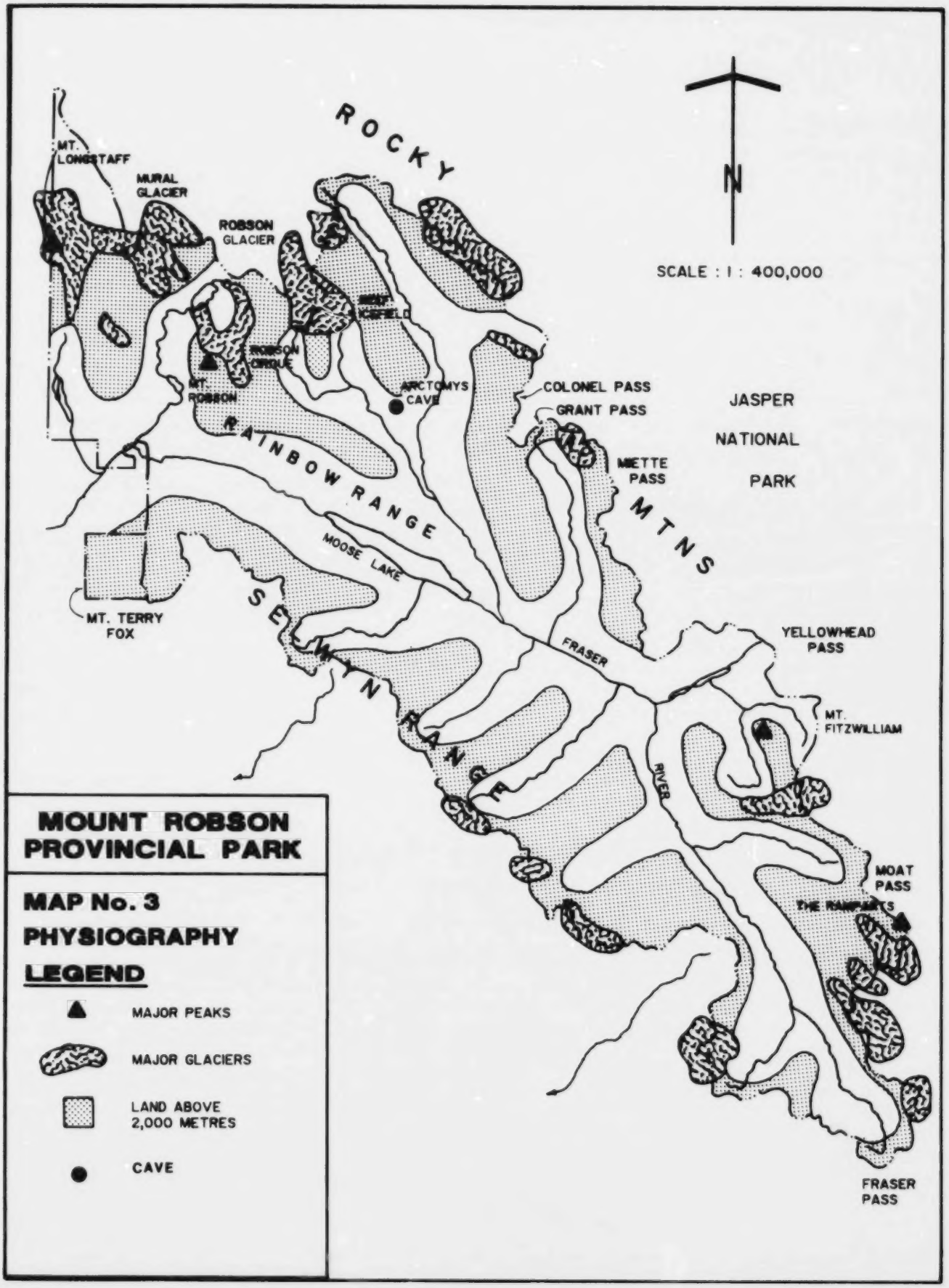
Of particular note in Mt. Robson Park is Arctomys Cave, discovered in 1912, but not fully explored until 1971-72. This limestone solution cave is the deepest in Rockies at more than 600m, with a long series of steeply inclined tunnels and chambers, many with intricate formations. Chemical solutions erode the limestone into these distinctive caves and underground drainage systems. The cave lies in the steeply dipping Mural Formation, between sandstones and shales. An underground stream flows throughout most of its length (Thompson, 1975).

Although copper and lead deposits are known in the park, no commercial quantities are thought to exist. The overall mineral potential for the park is rated as low. Other industrial minerals, such as limestone are in amounts considered no greater than that found elsewhere in the Rockies. (Mineral Potential of Mount Robson Provincial Park; M.E.M.P.R.,1975)

2.3.2 Geomorphology

The entire park area was heavily glaciated during the Pleistocene Epoch, about 11,000 years ago. Recent landforms have their origin in that glaciation (eg. kettle ponds), followed by water erosion, and deposition and erosion of soft bedrock from steep slopes. Alpine glaciation and periglacial ('near-glacial', such as snowfield or permafrost) activity continue at high elevations.

The most obvious result of glaciation is the deep U-shaped valleys, for example of the Fraser River, and the broad glacially eroded passes which cross the continental divide and other ranges. Mountains which protruded through the level of the Pleistocene ice sheets (those higher than about 2,500m) were eroded and steepened by local cirque glaciation. Ridges and shoulders of mountains below this elevation are more subdued in their relief, having been overridden by ice. Valley bottoms and sides, on slopes less than about 25 degrees, are blanketed by glacial till. Steep rock slopes are subject to frequent rockfall, and the fractured rock from such slopes forms extensive aprons of talus on many valley sides.


ROCKY
MT. LONGSTAFF
MURAL GLACIER
ROBSON GLACIER
ROBSON CIRQUE
MT. ROBSON
ARCTOMYS CAVE
COLONEL PASS
GRANT PASS
MIETTE PASS
JASPER NATIONAL PARK
RAINBOW RANGE
MOOSE LAKE
MTNS
MT. TERRY FOX
SELWYN RANGE
FRASER
YELLOWHEAD PASS
MT. FITZWILLIAM
RIVER
MOAT PASS
FRASER PASS
N
SCALE : 1 : 400,000
MOUNT ROBSON PROVINCIAL PARK
MAP No. 3
PHYSIOGRAPHY
LEGEND
MAJOR PEAKS
MAJOR GLACIERS
LAND ABOVE 2,000 METRES
CAVE

Water deposited materials, known as fluvial or glacio-fluvial deposits, are found in the larger valleys such as the Fraser River. Most smaller creeks and rivers flow in narrow channels, and fluvial landforms are not abundant. The Fraser River valley has several deposits of sand and gravel resulting from glaciation. These deposits continue to provide basic material for highway construction and maintenance operations.

Glaciers are found throughout the park, with the most notable in the vicinity of Mount Robson. The Robson Glacier and Robson Cirque cover a large area some 6 kilometres long. Berg Glacier, one of the few advancing glaciers in the Rocky Mountains, tumbles into the lake creating small ice-bergs. The Reef Icefield lies next to the Robson Glacier and is visible from Snowbird Pass. Larger in size, but with gentler slopes is the ice-field east of Mount Longstaff, at the headwaters of Swiftcurrent Creek. Small cirque glaciers are abundant on north facing slopes throughout the park. The Jade and Icefall Lake areas in the southern end of the park are heavily glaciated with these smaller cirque glaciers.

Terminal and lateral moraines are associated with many of these glaciers. Evidence of retreating ice is most accessible at the foot of Robson Glacier near Berg Lake.

2.3.3 Soils

Soils in the park are classified as dominantly Lithic, meaning that much of the area is bare rock but that there is significant soil development. In Mt. Robson Park, soils are of the Brunisolic and Podzolic Order. Brunisols tend to be coarse textured, such as sands and gravels that have undergone only moderate development from the original parent material. Parent materials in the park are often calcareous (from the limestone). Humo-ferric Podzols in the park belong to the Podzolic Order and are characterized by accumulations of iron, aluminum and a little organic matter in distinct upper layers, forming in cooler conditions than other Podzols (Valentine, Sprout et al, 1986).

Soil capability for agricultural use has not been studied, however, limitations of climate, stoniness and slope would restrict use of parkland to grazing and foraging.

2.4 BIOLOGY

2.4.1 Flora

Vegetation Features

Mount Robson Park is characterized by Canada's northern boreal forest with valley bottoms belonging to the Montane ecoregion. According to modern classification, the valley bottom lies mainly in the Interior Cedar Hemlock (ICH) and Sub-boreal Spruce (SBS) Biogeoclimatic Zone (see Description below) with the adjacent mountain slopes in the Engelmann Spruce-Subalpine Fir Zone (ESSF). Alpine tundra (AT) occurs above the 1,950 m level (Lea and Maxwell, 1989).

Lodgepole pine, white spruce and trembling aspen are the most noticeable to the highway traveller, in a wide transitional plant community from the Alberta border to the western portal. This belt comprises several forest types, often modified by fire. Forest fires, largely caused by man, were prevalent in the valley until about 1950. Most low elevation forest stands are now in

the 20-60 and 60-140 year age classes. Control of fires is allowing these forests to advance toward old-growth conditions (Blood and Anweiler, 1990). Railroad building and highway construction produced a wide corridor through the park which has been colonized by pioneer vegetation and exotic species from both east and west. This process is still taking place.

Lodgepole pine occurs in almost pure stands east of Yellowhead Lake. The mixed forests have a well developed understory of red-osier dogwood, thimbleberry, soopolalie, huckleberry, Saskatoon and wild rose. In wetter areas, particularly in riparian situations, black cottonwood is abundant. Douglas-fir is scattered throughout the valley, common on drier, well drained sites in the western areas of the park.

Near Yellowhead-Pass, the stands of lodgepole pine and birch mark the beginning of the transition to the eastern slopes of the Rockies, in the rain shadow. In contrast, the Kinney Lake area has a dense, coast-like forest, with species such as Red Cedar, where micro-climate effects are found. The Swiftcurrent Creek valley supports similar tree species.

Willows of several species are common throughout the park but form extensive "moose pastures" west of Moose Lake. Here, they neatly frame the sedgehorsetail meadows, ponds and bogs. Bogs, commonly called 'muskegs", are well developed here. Muskeg occurs where relatively flat terrain (e.g., flat-lying sedimentary rocks) and compact, poorly-drained soils prevent or greatly slow the drainage of water. Combined with the severe effects of freeze and thaw this results in an environment which limits vegetation to hygrophytic ('wet-growing') species. Vegetation in these areas includes a great variety of sedges, horsetails, rushes and grasses. The casual visitor should notice the cotton grass, Eriophorum, and the yellow-flowered shrubby cinquefoil, Potentilla.

Moving snow keeps avalanche chutes free of climax conifers and the early snow-free ground allows for a longer growing season, which is favourable to a profusion of woody shrubs and flowering herbs. Flexible shrubs such as willows, false azalea and white rhododendron form virtually impenetrable jungles on these slopes. In summer, flowering plants such as avalanche lily and fireweed are conspicuous features of these chutes.

Full park species lists are recorded in park naturalists reports available in the Ministry of Parks regional library in Prince George.

Special Vegetation Features

Mount Robson Provincial Park is host to numerous special plant communities and features. The wildflower meadows of Campion ridge and Resplendent Valley are well known and provincially significant. Alpine meadows throughout the park, such as in most of the passes, in alpine cirques and on Emerald and Alpland ridges are appreciated by many park visitors.

The distinct change in vegetation communities along the Berg Lake trail is also readily visible to park visitors. The lush Interior Cedar-Hemlock forest gives way to the sub-alpine species found at Berg Lake. It is unusual to be able to witness this transition so clearly along a short trail route.

Some of the oldest Whitebark Pines, (Pinus albicaulis), in Canada are found in the Giekie Creek area of the park, near Bennington Glacier (Luckman and Colenutt, 1988). These 800 year old specimens have survived by being located on ideal growing sites, out of avalanche range. Additional information on rare or endangered plant species was not available during preparation of this report.

Biogeoclimatic Zones

Biogeoclimatic Zones, Subzones, and Variants are a useful way to classify park flora. These zones also help identify wildlife habitat. Biogeoclimatic Zones have a unique combination of identifiable climatic patterns, soil types, and plant species. Biogeoclimatic zones are named after the dominant member of the mature plant community. Fires, elevation, and aspect affect the species composition. In many areas an observer may not see the dominant species because the forest is in a transitional state. Lea and Maxwell (1989) produced preliminary biogeoclimatic mapping and habitat units for the park and some adjacent lands. The vegetation section is based on their work.

A Biogeoclimatic Subzone is defined as a geographical area supporting a distinct ecosystem within the zone. A Biogeoclimatic Variant is a subdivision of a subzone based on differences in climate other than what is typical for the subzone (Pojar et. al., 1987). These climatic differences result in corresponding distinctions in vegetation and soil.

Four Biogeoclimatic Zones, the Alpine Tundra Zone, Engelmann spruce-Subalpine Fir Zone, Interior Cedar-Hemlock Zone and the Sub-Boreal Spruce Zone occur in the study area. The Engelmann Spruce-Subalpine Fir Zone is represented by two subzones, one having two variants. See Map #4.

Valley Bottom and Lower Slopes

1). Interior Cedar-Hemlock Zone

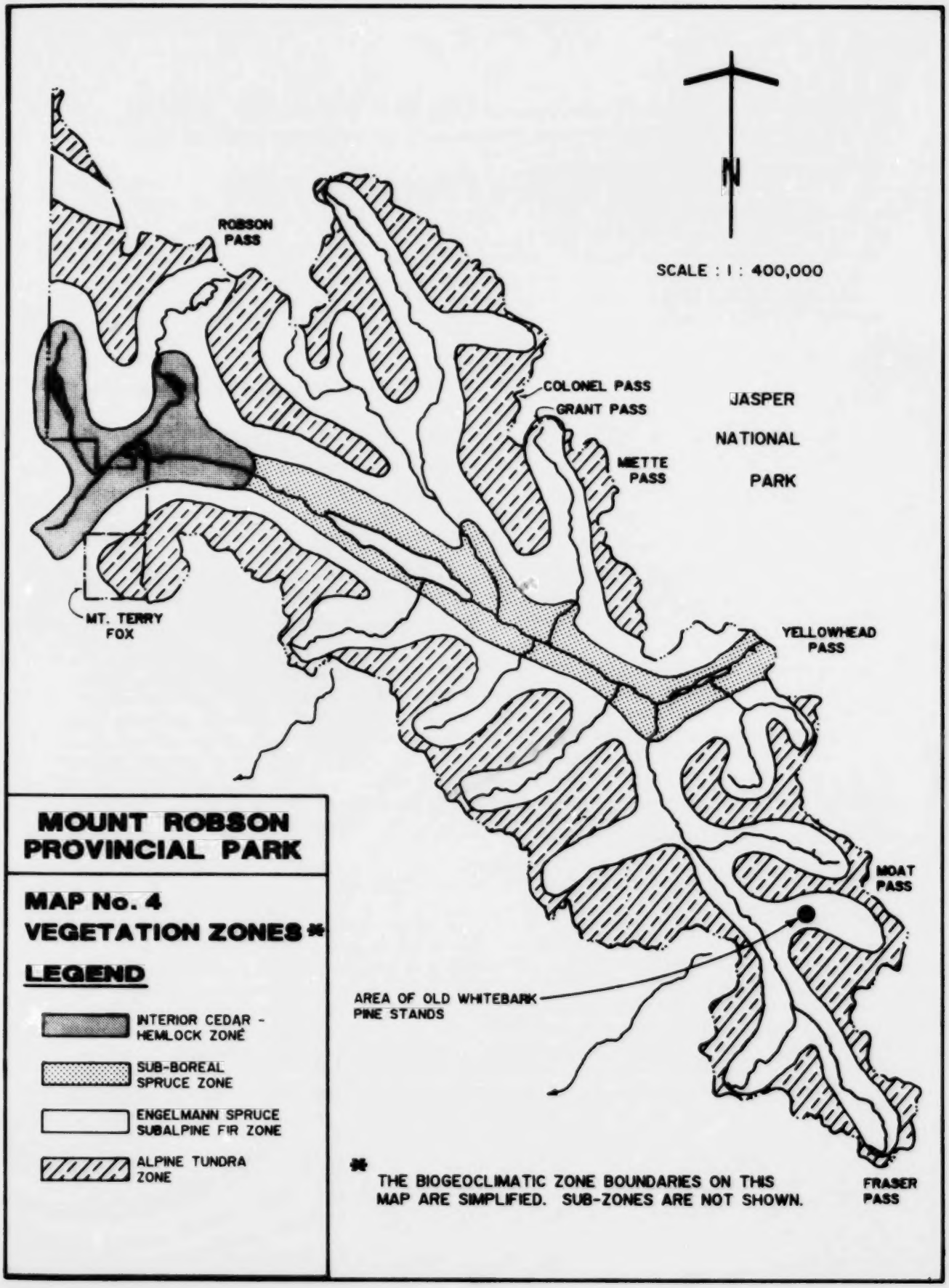
Location: Lands below about 1350 m in elevation fall into two Biogeoclimatic Zones. The Interior CedarHemlock Zone (ICHmm) occurs on the valley bottoms and lower slopes in the extreme western part of the highway corridor. This includes the lower 10 km. of Swiftcurrent Creek valley; Robson River valley below Kinney Lake, and the Fraser River valley to a point about 5 km east of the park headquarters.

Vegetation: Climax trees are mainly western cedar with western hemlock and subalpine fir; Common seral (transitional) species include paper birch, trembling aspen, lodgepole pine and Douglas-fir.

Typical understory shrubs are false azalea, thimbleberry, red-osier dogwood, devil's-club and soopolallie. Common herbs are bunchberry, oak fern and queen's cup. The moss layer is quite dense in advanced seral stages. Douglas-fir dominated communities occur on southerly aspects and have an understory of saskatoon, soopolallie, Douglas maple and twinflower. Trembling aspen may be common in early successional stages. Western red cedar-devil's club communities may occur in these sites (Lea and Maxwell, 1989).

2). Sub-Boreal Spruce Zone

Location: The hot, dry subzone of this zone (SBSdh) occurs throughout the main Fraser River-Yellowhead Lake Valley, below 1350 m. At its western edge it merges gradually with the ICH Zone just east of the park entrance.


N
SCALE : 1 : 400,000
ROBSON PASS
COLONEL PASS
GRANT PASS
MIETTE PASS
JASPER NATIONAL PARK
MT. TERRY FOX
YELLOWHEAD PASS
MOAT PASS
AREA OF OLD WHITEBARK PINE STANDS
FRASER PASS
MOUNT ROBSON PROVINCIAL PARK
MAP No. 4
VEGETATION ZONES *
LEGEND
INTERIOR CEDAR - HEMLOCK ZONE
SUB-BOREAL SPRUCE ZONE
ENGELMANN SPRUCE SUBALPINE FIR ZONE
ALPINE TUNDRA ZONE
* THE BIOGEOCLIMATIC ZONE BOUNDARIES ON THIS MAP ARE SIMPLIFIED. SUB-ZONES ARE NOT SHOWN.

Vegetation: The climax tree is hybrid spruce (white spruce X Engelmann spruce). Douglas-fir is a long-lived seral species. Other seral trees are lodgepole pine and trembling aspen.

Common understory shrubs are birch-leaved spirea, prickly rose, thimbleberry and soopolallie. Bunchberry and twinflower are typical herbs. A moderate to dense moss cover occurs in advanced seral stages. Steep, dry, southerly aspects, e.g. above Moose and Yellowhead Lakes, have climax forests of Douglas-fir with an understory of saskatoon, soopolallie, Douglas maple and twinflouer. Early successional stages may have abundant trembling aspen. Moist, lower slopes have lush vegetation of trembling aspen, spruce, thimbleberry, red-osier dogwood, devil's club, black twinberry, bunchberry, oak fern and horsetails. These sites are restricted in extent. This zone contains an extensive area of wetlands east of Moose Lake.

Those wetlands are characterized by a mosaic of shrubs and black spruce bog with shallow open water. Willows and horsetail are the predominant wetland plants (Lea and Maxwell, 1989).

Variants in the Sub-Boreal Spruce Zone include drier and warmer sites where Douglas-fir dominates, or where trembling aspen grows during early successional stages, leading to Douglas-fir climax communities.

Subalpine Slopes

The Engelmann Spruce-Subalpine Fir Zone (ESSF) occurs below the Alpine Tundra Zone and above the Sub-Boreal Spruce or Interior Cedar-Hemlock Zones, from approximately 1350m to 1950m. In the Fraser River corridor most of this zone is dominated by mature coniferous forests, over 140 years of age. However, shrub-dominated avalanche paths are common on steep-sided valley walls. Subalpine meadows dominated by white mountain-heather or forbs and sedges are common at higher elevations in this zone, where continuous forests give way to parkland.

1). Lower Subalpine Fir Zone (ESSFmm)

Location: This subzone occurs immediately above the ICH .

Vegetation: Forests consist of lodgepole pine, subalpine fir and Engelmann spruce. In the eastern part of the corridor, black spruce is common in lower slope positions, indicating a boreal climatic influence from the east. Whitebark pine (upper elevations) and Douglas-fir (lower elevations) may occur on southerly aspects. Adjacent to the SBS zone, understory vegetation is dominated by a shrub cover of false azalea and Labrador tea, the herb layer commonly has bunchberry and dwarf blueberry, and the moss layer is usually well represented. Above the CWH Zone, typical shrub species include false azalea, white-flowered rhododendron and black huckleberry; the herb layer commonly has five-leaved bramble, bunchberry and oak fern; and the moss layer is often well represented (Lea and Maxwell, 1989).

2). Subalpine Parkland Zone (ESSFMM)

Location: Elevations between the forested ESSF subzone and the Alpine Tundra Zone.

Vegetation: This subzone is covered in patches of trees, often in krummholz form, separated by alpine-like openings. Subalpine fir and Engelmann spruce are the dominant trees. The understory is dominated by meadows of mountain-heather or forbs and sedges. This subzone is subjected to long snow duration and a short growing season.

Alpine Areas

1.) The Alpine Tundra Zone (AT)

Location: Alpine tundra occurs above approximately the 1950 m elevation. Extensive areas of alpine meadows occur in the Resplendent Valley, Miette Pass, Moose Pass, and Fraser Pass.

Vegetation: Large areas of rock, snow and glacier are present, but at lower elevations of the zone, especially where slopes are moderate and soils have developed, communities of mountain heather or forb and sedge meadows occur.

Alpine meadows are confined to wetter slopes and moist hollows usually with good drainage. Here, during the short summer, there is a profusion of alpine blossoms of such plants as mimulus, anemone, valarium, saxifrage, arnica, phlox and eriogonum. Heathers and vacciniums may be abundant.

2.4.2 Fauna

2.4.2.1 Wildlife (See also Map # 5)

Wildlife depend on specific habitat, which is linked to the biogeoclimatic zones outlined above. Flora and fauna are best thought of together, as part of an ecosystem.

The species composition of vertebrate fauna in Mount Robson Park is fairly well known, but population sizes, seasonal movements and habitat relationships are less well documented. To date, 42 species of mammals, 182 of birds, 4 of amphibians, and 1 reptile have been recorded in the park. A few additional species may occur but any missed to date are not expected to be numerous or ecologically significant (Blood and Anweiler 1990).

The many landforms found within Mount Robson Park provide a wide range of habitats for wildlife populations associated with the western slopes of the Rocky Mountains. The fauna is typical of the western, relatively moist slope of the Rocky Mountains. Species composition and population density is probably more similar to Yoho National Park, 240 km to the south on the west slope of the Rockies, than to Jasper National Park, immediately adjacent on the east slope. The bulk of resident species are adapted to coniferous forest habitats of one kind or another (Blood and Anweiler, 1990).

Hunting for most game species ceased in 1978, with only moose and deer harvested until 1986. The park is now closed to hunting. Game populations are thought to be recovering from earlier declines attributed to hunting (D. King, pers. comm. and Blood and Anweiler, 1990).

One trapline remains in the park, but is not expected to cause a decline in fur-bearing species populations.

Mammals:

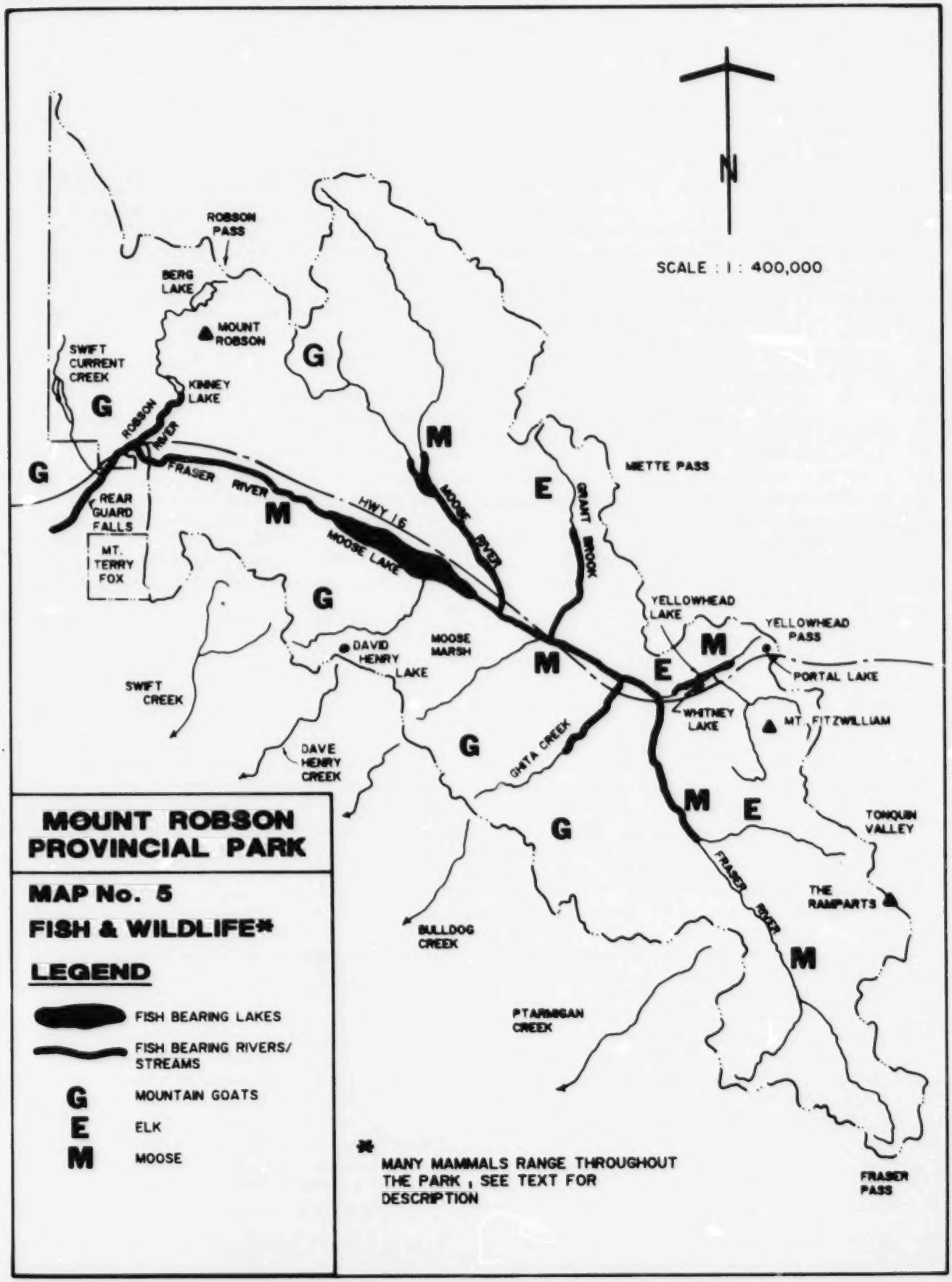
Moose inhabit all the valley bottoms in the park and may be seen in the marshes at the east end of Moose Lake. Moderate grizzly bear populations are supported in the park, with relatively more animals in the less travelled south end of the park. Mountain goat and grizzly bear frequent the rock slides on the south side (Emerald Ridge) of the Yellowhead Highway and Yellowhead Lake. Caribou range the high basins and tablelands, while mule deer and black bear are found throughout the park, and elk roam the eastern areas. Elk are now reportedly staying in the Yellowhead Highway corridor all year round. Many have moved west out of the park. Bighorn sheep and cougar occur in the park only sporadically.

The large herbivores such as bears are resident within the park. In summer they move up and disperse, in winter they move down and concentrate. Grizzly bear and black bear habitats were assessed in 1989, with respect to potential conflicts with recreation, trail and campsites locations (McCrory and Mallum, 1989). The study examined seasonal habitat for bears based on their food sources. In 1990, various trails and campsites were improved to avoid bear-human conflicts. In the spring, after den emergence, Grizzly bears feed on roots and corms, with both bear species feeding on green plants. In summer, green vegetation and early berries, such as huckleberry and buffaloberry, are eaten, with grizzly bears also seeking roots and corms at higher elevations. From September to October, berries are preferred, with grizzly bears also digging for roots and corms. Spawning salmon to the west of the park are eaten seasonally.

Goats generally stay close to their home range, while moose and caribou move much greater distances. A band of goats can be seen seasonally on Cinnamon Mountain N.W. of the viewpoint. Goats are most often found on south-facing slopes. In winter moose concentrate in willow thickets at lower elevations such as the Moose Lake marsh area and deciduous forests in the vicinity of the Fraser River near Robson Meadows. The carrying capacity of moose, elk and deer winter ranges will decline as forests move towards old-growth conditions, while caribou may benefit (Blood and Anweiler, 1990). Winter range is the prime factor in the distribution and abundance of ungulates.

Small animals such as the pika and the marmot inhabit the higher rocky terrain, and squirrels and chipmunks are found at lower elevations. Beaver and muskrat inhabit the marshlands of the park. Ground squirrels and marmots are local in distribution and diurnal in habit. Their sedentary habit and usually approachable nature make them popular subjects for photography. Varying hares may be abundant and noticeable when at their cyclical peaks. Their effect on the regeneration of deciduous trees (prime winter food of hares) is considerable.

Species common in forested habitats of the highway corridor, but which also occur in forested valleys outside it, include shrews, mice, Columbian ground squirrels, chipmunks, snowshoe hare, porcupine, black bear, and marten. Porcupines are often seen by hikers. In summer they spend most of their time on the ground feeding on a variety of herbaceous plants; in winter they subsist on a diet of inner bark. The lodgepole pine is the porcupine's favorite food tree. The porcupine climbs to top branches then eats its way down leaving only a white skeleton behind. Typical species more or less restricted to the Robson valley include elk, mule deer, beaver, muskrat, river otter, mink, wolf and coyote. Muskrat houses are a feature of Moose Lake Marsh. Beaver workings can be found along the Fraser River Trail below the Robson Meadows Campground and abundantly at Lucerne on the Labrador Tea Trail. Beavers, perhaps because of their highly visible engineering abilities, their affects on boreal



MOUNT ROBSON PROVINCIAL PARK

MAP No. 5

FISH & WILDLIFE*

LEGEND

- FISH BEARING LAKES
- FISH BEARING RIVERS/ STREAMS
- G — MOUNTAIN GOATS
- E — ELK
- M — MOOSE

* MANY MAMMALS RANGE THROUGHOUT THE PARK, SEE TEXT FOR DESCRIPTION

forest ecology and their national recognition as the Canadian symbol, are a favorite with both interpreters and visitors.

Full park species lists are recorded in park naturalists reports and the 1986 Park Interpretation Plan.

Birds

Mount Robson Park's wide range of habitat, from alpine meadows to low elevation wetlands supports a diversity of bird species, particularly during the summer months. Alpine areas of the park, while supporting a very low diversity of species, harbour some of the more interesting ones such as the golden eagle, harlequin, willow and white-tailed ptarmigan, and grey-crowned rosy finch.

As most of the park along the Yellowhead corridor is forested, the common and characteristic species are those adapted to forest habitats. However, smaller areas of wetland, bog, meadow and edges along disturbed sites such as rights-of-way each have species not found elsewhere, and these areas add greatly to the diversity of park birds. Some species (i.e. bank and barn swallow; house sparrow) would likely be absent if the area remained in a pristine condition.

Areas of the park having unusually high diversities of breeding bird species include the rivers edge habitats along the lower Robson River where beaver have colonized, and the marsh at Moose Lake. Mount Robson Park is home to a minimum of 25 species of permanent avian residents. These include:

- *raptors* such as goshawk, great horned owl, boreal owl, great gray owl;
- *grouse* such as ruffed, spruce, blue grouse, willow and white-tailed ptarmigan;
- *corvids* (omnivorous feeders) such as gray jay, black-billed magpie and common raven;
- *woodpeckers* (grubs and ants from rotten wood and under bark) such as hairy, northern and black-backed three-toed woodpeckers;
- *chickadees* (bark gleaners) such as black-capped, mountain and boreal; waxwings (frozen fruits) such as bohemian waxwing;
- *finches* (seed-eaters) such as evening and pine grosbeaks, gray-crowned rosy finch, red and white-winged crossbills.

Transients include several species of waterfowl which breed on the prairies and winter on the south coast, and shorebirds which breed in the more northerly boreal forests and winter well south of the Canadian border. Red-necked and horned grebes, mallard and ring-necked ducks and American coots breed in Moose Lake marsh. They can be seen from the highway by even the casual visitor. Other waterfowl species include the loons, bufflehead, mergansers, Canada goose and goldeneyes. Shorebirds include yellowlegs and sandpipers. Migrating waterfowl and shorebirds are easily seen at Moose Marsh during the spring and fall.

Most abundant of the summer bird visitors are the colourful small woodland species such as warblers. The Blackpoll warbler performs the longest and the most spectacular migration of all the summer birds. In late August, the Blackpoll, together with other migratory woodland species, move eastward through the prairie provinces and eventually to the atlantic seaboard. The final stage of their journey takes them non-stop across the ocean to their winter home in northern South America.

Six species of birds (Brewer's sparrow, yellow-headed blackbird, osprey, pileated woodpecker, great horned owl, and red-necked grebe) probably nest in the Fraser River valley. These birds

are noted in various rare/endangered species lists (Blood and Anweiler, 1990). Full park species lists are recorded in park naturalists reports and the 1986 Park Interpretation Plan.

Amphibians and Reptiles

Four amphibian and one reptile species are known to inhabit Mount Robson Park. The northwestern toad, northern wood frog, and western spotted frog inhabit the Moose Lake marsh.

2.4.2.2 Fish (See also Map #5)

The lakes and streams of Mount Robson Park are cold and often silty, with low productivity for fish. Some lakes, such as Berg Lake are barren of fish due to the near complete lack of food and extremely cold temperatures. Fishing is permitted in the park, but is rated as poor to fair, with the best success in a few stocked smaller lakes.

Moose Lake has generally low productivity, but some large rainbow trout, dolly varden and kokanee are caught. Use is limited and fishing is not advertised. Yellowhead Lake and Lucerne Lake (the same water body connected by a narrows), has a native fish population of rainbow trout and dolly varden up to 1.5 lbs. Some lake trout are also caught. Limited stocking and spawning enhancement programs have been carried out.

Whitney and Portal Lakes, two small lakes near Yellowhead Pass have been stocked regularly for about 10 years. They yield 1-1.5 lb rainbow trout, with fair fishing success. Local people from the Jasper and the Tete Jaune Cache area use the Yellowhead Lakes for fishing. Some small alpine lakes in the park have limited capability for fish, such as the lake near the headwaters of Dave Henry Creek along the western boundary. Berg and Kinney Lakes are not managed for a fishery due to cold silty waters with low capability for fish.

Streams and rivers in the park are glacial, low in nutrients, and prone to flash floods. Fish are occasionally caught, but success rates are poor. The Fraser River has low productivity in the park, but dolly varden and rainbow trout are present downstream of Moose Lake to Tete Jaune Cache. Rearguard and Overlander Falls restrict fish movement. With the exception of a few salmon, Rearguard Falls effectively limits fish migration from the lower Fraser River into Mount Robson Park. Salmon may be viewed jumping as they attempt to clear Rearguard Falls during spawning runs.

Robson River has few fish, but dolly varden are occasionally caught. Moose River, Grant Brook, Ghita Creek, and the Upper Fraser support some dolly varden and rainbow trout, best caught in the spring.

2.4.3 Ecology

Mount Robson Park lies in the Southern Rocky Mountains Ecoregion of which one part, the Northern Continental Ranges Ecosection is represented (Lea and Maxwell, 1989).

The geology, geomorphology, climate, hydrology, vegetation, fish and wildlife resources combine to create the park's ecosystem. All of the natural resources in the park are inter-connected and dynamic, although not yet fully understood. The climate and soil characteristics of the Rocky Mountains have resulted in the Interior Cedar Hemlock and Englemann Spruce-

Subalpine Fir vegetation zones, in turn creating a range of wildlife habitats supporting a diversity of species.

The park does not form an ecosystem separate from the lands adjacent to it. Wildlife move in and out from Jasper National Park, and along the western boundary. Vegetation zones cross park boundaries, with harvesting of mature trees west of the park. No single ecological feature stands out in the park, yet many are worth highlighting to emphasize the relationship between the natural resources outlined separately in preceding sections. Table #3. shows some of the most important aspects of the park ecology, where flora, fauna and physical features are closely connected. These ecological relationships are visible to the visitor, and may require special a management approach. Many ecological themes are well suited for interpretation by park visitors.

Table #3 Selected Ecological Features in Mount Robson Park

Mount Robson Park as part of Northern Continental Ranges Ecosection

Mount Robson Park Biogeoclimatic Zones and Subzones

Mammal habitat and links to biogeoclimatic zones, seasonal changes

Moose Lake Marsh hydrology connected to mammal and bird life

Alpine meadows, hydrology, plant life, connected to summer range for bears and park visitors

Avalanche chutes, for example along north side of Emerald Ridge, show specially adapted vegetation, and seasonal wildlife habitat all connected to slope and climate

Glaciation, siltation, and fish populations, connected to fishing success in the park

Large mammals such as the grizzly bear, dependent on the same wilderness that attracts park visitors

Fire history and relationship to ungulate habitat, linked to habitat management methods

Human use and ecology of the park, for example wildlife viewing, effects on vegetation or water quality

Wildlife habitat protection as well as wildlife viewing are important management considerations. Elk are often seen near the highway.

Interpretive talks are popular at the park Visitor Centre. These talks focus on the varied and rich natural and cultural resources of the park. Public education helps further park management objectives.

3.0 CULTURAL RESOURCES

3.1 Archaeology

Archaeological resources in the park date from prehistoric and historic occupation and travel by the Shuswap Indians in the Yellowhead Pass area. Historic use from Euro-Canadian exploration, the trapping and trading era, railway construction and settlement have also left sites with potential for archaeological investigation and interpretation.

Three archaeological sites along the Yellowhead corridor are identified on B.C. Heritage Branch maps. House depressions, cache pits, 5 cache depressions, and basalt flakes have been found at these sites. An historic village with a prehistoric component has revealed 14 house depressions, and 21 gravesites from 1919.

3.2 History

The history of Mount Robson and the Yellowhead Pass is a fascinating one, providing a rich dimension to the interpretation of the park. Human use is linked closely with the areas natural resources from the earliest times to the present. Subsistence hunting, seasonal availability of berries and fish, fur trading, and the movement of people and goods were all affected by the environmental conditions of the day and the difficulties associated with travel in mountainous terrain. New ways of appreciating the wilderness for its scenery and recreation changed the way these mountains and valleys are used, but the links with the environment have remained.

This history section is adapted from Taylor (no date), and Wuorinen (1976), as narrated in the Mount Robson Interpretive Plan, 1986. The main historic themes of the park are:

Native History
Fur Trade and Exploration
The Overlanders
Cheadle and Miltons Northwest Passage
The Railway Survey Era
Early Climbers, Tourists and Settlements
The Yellowhead Highway

Native History

Yuh-hai-has-kun or the Mountain of the Spiral Road (referring to the layered appearance) was the name given Mt. Robson by the Texqakallt, the earliest known inhabitants of the upper reaches of the Fraser River. According to early Euro-Canadian travellers, these Shuswap Indians of the Upper North Thompson Band were nomadic. A seasonal round linked to the availability of food would have determined their location at any given time. Lodges and fish drying racks were constructed in prime fishing territory at the confluence of the McLennan and Fraser Rivers in the vicinity of what is now known as Tete Jaune Cache. At times they

constructed bark teepees. As well as salmon from the Fraser, trout were reportedly taken from Yellowhead Lake. They hunted bighorn sheep, mountain goats, moose, marmots, and other small mammals and birds. They also relied on edible plants, especially berries.

As the Shuswap Indians were extending their hunting territory westwards through the Yellowhead Pass, the Cree, with the advance of the fur trade, were extending theirs from the east towards the Jasper area. Eventually the two territories overlapped. As a result, both the Shuswap and the Cree languages were spoken by the group of 30-40 families that frequented the area. The French language was introduced around 1817 by J.F. La Rocque, a French Canadian voyageur employed by the Northwest Company. La Roque was heading for New Caledonia's Fort George, accompanied by a group of expert Iroquois canoemen, greatly valued for their speed of transport across the Canadian wilderness.

In 1865, Milton and Cheadle suggested that:

> *"...when first met by the pioneers of the Hudson's Bay Company, the only clothing used by these people was a small robe of the skin of the mountain marmot. They wandered barefoot amongst sharp rocks, and amidst the snow and bitter cold of the fierce northern winter. When camping for the night they are in the habit of choosing the most open spot, instead of seeking the protection of the woods. In the middle of this they make only a small fire, and lie in the snow, with their feet towards it, like the spokes of a wheel, each individual alone, wrapped in a marmot robe, the wife'apart from her husband, the child from its mother. They live, by hunting bighorns, mountain goats, and marmots; and numbers who go out every never return.*
>
> *Like the chamois hunters of the Alps, some are found dashed to pieces at the foot of almost inaccessible heights to which they follow their game; of others no trace is found. The Shuswaps of Jasper House formerly numbered about 30 families, but are now reduced to as many individuals. Removed by immense distances from all other Indians, they are peaceable and honest, ignorant of wickedness and war. Whether they have any religion or not, we could not ascertain; but they enclose the graves of their dead with scrupulous care, by light palings of wood, cut, with considerable neatness, with their only tools - a small axe and knife. They possess neither horses nor dogs, carrying all their property on their backs when moving from place to place; and when remaining in one spot for any length of time, they erect rude slants of bark or matting for shelter, for they have neither tents nor houses. As game decreases the race will, doubtless, gradually die out still more rapidly, and they are already fast disappearing from this cause, and the accidents of the chase."*

Native people were likely prominent, although not always credited, in the early exploration and trading around Yellowhead Pass and Tete Jaune Cache. They offered guiding services and expertise in locating and killing game for those who might otherwise have floundered.

Fur Trade and Exploration

Competition between the Northwest Company and the Hudson's Bay Company increased as the H.B.C. pushed further into the trading territory previously held by the Northwest Company. In February of 1819 John Clarke, of the H.B.C.'s St. Mary's post on the Smoky/Peace River confluence, chose Jose Gaubin to lead an expedition with a band of Iroquois to cross the mountains into New Caledonia to see if the natives could be induced to trade with the Hudson's Bay Company. In December of 1819, Ignace Giasson began another H.B.C. push up the Smoky. Colin Robertson, (after whom Mt. Robson is possibly named) man-in-charge of the Hudson's Bay Company's operations in the area, prepared written instructions specifying that the group be accompanied by the yellow-haired Iroquois guide: Pierre Hatsination, or Tete Jaune as he came to be called. The group was to ascend to the Grand Forks of the Smoky where they were to meet another group of Iroquois, wait until spring, and then cross Robson Pass to make friends with the Shuswap Indians of the upper reaches of the Fraser. On June 10, 1820, James McDougal recorded in the Northwest Company's journal at

Fort St. James that he had heard "a report of there being at the Forks of Fraser's River one of the H.B.'s clerks and three men".

Due to the inability of the Northwest Company and the Hudson's Bay to withstand intense competition they amalgamated under the name of the Hudson's Bay Company. George Simpson took over from Colin Robertson as man-in-charge of the area. As Governor of the Northern Department, in 1825 Simpson sent James MacMillan guided by Tete Jaune to survey the Yellowhead Pass area. One year later he ordered the "... requisition of 500 Dressed Moose and Deer Hides be provided and forwarded by the Saskatchewan District to Tete Jaune Cache on or before the close of September proxo." This was the first written message of Tete Jaune Cache.

Tete Jaune continued trapping and trading in the area and by 1827 had relocated his cache from the Grand Fork of the Fraser to the vicinity of the Shuswap salmon fishing camp on the Fraser River where Tete Jaune Cache stands today. Sometime in 1828 near the headwaters of the Smoky River, he, his brother, their wives and children were murdered by the Beaver Indians as revenge on the Iroquois for their earlier encroachment into the Beaver's hunting territory. Eventually a pack trail was established through Tete Jaune's Pass and the leather passed through until 1830 when, due to difficulties with passage through the Pass, Simpson ordered the leather to be transported through the Peace River Country, and the Leather Pass fell into disuse.

The Overlanders

It wasn't until the early 1860's that the Yellowhead Pass was again used frequently. In the fall of 1861, H.J. Moberly quit his post as H.B.C. factor at Jasper and made his way to Ft. George through the Yellowhead with the aid of a young Iroquois guide. In 1862 a group of 115 men and 1 woman began to ascend the Yellowhead Pass. They had left Ontario some months earlier and were heading to the British Columbia Cariboo in search of gold. While in Fort Edmonton they discussed the merits of this pass with a party of miners returning from the Cariboo and decided to travel this route to reach their destination.

They abandoned their carts and struggled onward with pack-oxen and horses and with packs on their backs. After crossing the height of land at the summit of the Yellowhead Pass, the first of the Overlanders camped at Cow Dung or Yellowhead Lake. They continued on and camped at Moose River, Red Pass, and at the original Tete Jaune's cache. At Tete Jaune their trails diverged. Many headed down the Fraser River, and many died en route. Some made their way to the Cariboo gold fields. At about the same time another group of travellers was lured by gold to the Yellowhead- Cheadle and Milton.

Cheadle and Miltons Northwest Passage

Dr. Cheadle and Lord Milton began their journey in England, landed in Quebec in July of 1862, and travelled overland eventually ending at Jasper House. Here the group hired an old Iroquois to guide them as far as Tete Jaune Cache.

On Thursday, July 9, 1863, the group crossed the continental divide on the Yellowhead Pass and camped "...for dinner at the head of Buffalo Dung Lake. Our guide told us this lake was a great fishing place for the Shuswaps and frames for drying fish bore out his contention" (Milton and Cheadle, 1865).

Cheadle claimed the road "to be pretty good all the way," that is, as far as Buffalo Dung or Yellowhead Lake. From that point on they were met with "muskeg, water, mire, [and] marsh in the low ground." Before reaching Moose Lake, Milton, Cheadle and O'Byrne all had narrow escapes with severe injury and death. Writing in his diary, Cheadle claimed that "everybody was tired and glad to camp, and we had a feast of bread and vegetable soup, this being the hardest day we have had, and during the afternoon the worst road."

On passing by the original Tete Jaune Cache at the Grand Forks of the Fraser the group caught "a glorious sight, and one which the Shuswaps of the Cache assured us had rarely been seen by human eyes, the summit being generally hidden by clouds...a giant of giants ... Robson's Peak" (Milton and Cheadle, 1865). The next day the group moved on towards the present Tete Jaune Cache. At Tete Jaune Cache they were able to secure salmon, berries, and pemmican. The old Iroquois guide turned back for Jasper and the remainder of the party followed the river route to Kamloops.

The Railway Survey Era

In 1865, Dr.John Rae, sponsored by the Hudson's Bay Company, the Imperial and Canadian Governments, and the Grand Trunk Pacific Railway surveyed Yellowhead pass for a possible railway, wagon road and telegraph line that would connect the new colonies in British Columbia with the rest of Canada. Formal surveys were not conducted until 1871, by Sandford Fleming. Even though the pass was found to be the most acceptable, the C.P.R. abandoned the route in favour of the more southerly Kicking Horse Pass. The Yellowhead Pass route saw little activity until the turn of the century.

In 1898 James McEvoy, a geologist, travelled through the pass and mentioned Yuh-hai-has-kun, the Shuswap name for Mt. Robson. Soon after McEvoy left the area a small group of miners struck gold at the confluence of Swiftcurrent Creek and the Fraser. Several small, well previsioned parties began to flock into the area, but, unable to make any profit, they gradually drifted away.

By 1900 the Grand Trunk Pacific, then one of Canada's major railway corporations, began talking about a second trans-continental railway. Not only did the Grand Trunk Pacific Railway begin to show interest, but another railway, the Canadian Northern, began to send surveyors and pack trains through the Pass. Once again the Yellowhead Pass was showing more promise as a transportation route.

Early Climbers, Tourists and Settlements

Along with the surveyors and pack-trains, came men that knew how to handle horses. Many of these, greatly impressed with the beauty of the area, decided to stay and make a living. One of these was John Yates. He "came into real prominence early in 1907 when he was able to outmaneuver, out-drink and outride his opponents in a contest for the contract to carry the mail to the railroad construction camps between Edmonton and Tete Jaune Cache." (Hart, 1979, pg. 87).

In 1906, A.0. Wheeler of the Alpine Club of Canada, with Sir Sandford Fleming as honorary president, decided that the organizations first assault should be on untrodden Mt. Robson. It took the climbing expedition 41 days to reach the base of mountain. Their food was almost gone and their horses were sick and lame. Finally, after reaching Emperor Falls, the weather worsened and they decided to retreat. On the way out, plans were made for a repeat attempt in 1908.

John Yates and Adolphus Moberly (one of H.J. Moberly's descendants) guided the 1908 expedition up the Moose River, over Moose Pass onto the headwaters of the Smoky, and over Robson Pass to the foot of Robson Glacier. Continuous rain and snow excluded the possibility of an attempt on Mt. Robson, and, as they waited, their food supply dwindled. They camped at the base of Mt. Robson for three weeks amongst the wind, rain, sleet, and snow. After a number of assaults, one of which the Reverend George B. Kinney attempted alone they decided to retreat from the mountain. Plans were made to return the following year and again Yates was asked to accompany the expedition.

In the Spring of 1909 Kinney heard rumours of the approach of a group of mountaineers bound for Mt. Robson. Fearing a successful foreign assault, Kinney set out from Victoria early in hopes of beating them to the summit. During his trek to the mountain, Kinney met Donald 'Curly' Phillips. Kinney persuaded Phillips, a non-climber, to join in his endeavors and they began their ascent to Mt. Robson.

"No ascent in the history of the Canadian Rockies demanded more sheer guts and determination in the face of hair-raising brushes with death by avalanche, exposure and starvation" (Hart, 1979, pg. 9). After 2 unsuccessful attempts due to inclement weather they managed to reach the 10,500 foot level. They hacked a ledge out of the ice and bivouacked for the night. As they were making their way up the steep slopes a storm passed over but they continued to climb with ice covering their hands and feet. On the ridge leading to the summit the wind had heavily corniced the snow, but still they pushed on through the blinding storm. Late in the afternoon Kinney stood "on a needle peak that rose so abruptly that even cornices cannot build very far out on it. Baring my head I said 'in the name of Almighty God, by whose strength I have climbed here, I capture this peak, Mount Robson, for my own country and for the Alpine Club of Canada'" (Hart, 1979, pg. 92). In fact, Kinney never made it to the summit, stopping short below an icy and steep summit. His insistence on claiming the first successful climb resulted in one of Canada's most enduring climbing controversies. It was not until Kinney was an old man that he admitted that perhaps they had been short of the summit on that stormy day in 1909.

End-of-steel villages were beginning to spring up all along the Grand Trunk Pacific Railway. Movement into the Yellowhead area was facilitated by the "iron horse' and more people took advantage of the ease of transportation. Life in the villages wasn't always easy. Typhoid raged from camp to camp, taking its toll of human life. Living conditions were sometimes atrocious, and labor disputes erupted sporadically. A typical bunkhouse in one of the end-of-steel construction camps was described (Talbot, 1912) as:

> *...a long low building, covered with black tar paper, it looks dingy enough. The door when opened lets out an atmosphere reeking with coal oil, bad tobacco, and wet socks. On the right are two tiers of wooden bunks, each tier consisting of two bunks side by side. The men are pretty closely packed. A bench runs along by the bunks, and this, with several boxes and tree stumps, forms the sitting accommodation. The floor is covered with mud and slush, brought in by many pairs of boots, with the socks which belong to them are hung up in various advantageous positions near the central heater in which a huge wood fire is roaring...*

By 1911 work trains were running to Summit City (Mile 0), Lucerne, Moose City and Red Pass (Mile 29). The railway went through in spite of reputed lawlessness at the work camps. In fact two railways went through: the Grand Trunk Pacific and, shortly thereafter, the Canadian Northern. Lucerne became an important terminal for the Grand Trunk with a depot, a coal tripple, a marshalling yard for freight cars, two round houses, two stores, a school, a doctors office, pool hall, saloons, barbers, bunkhouses, and restaurants.

In 1911, A.0. Wheeler organized a joint Alpine Club of Canada - Smithsonian Institution Expedition into the Robson area. Many prominent scientists and climbers were in the party, among them Conrad Kain. While the expedition was waiting at Berg Lake (for the horses to make the return circuit around Robson to avoid the steep cliffs in the Valley of a Thousand Falls) Conrad Kain set off alone and succeeded in climbing Mt. Whitehorn, the first man known to have done so. Wheeler stalled the group and no attempt was made on Robson, the general feeling being that they wanted to save the second assault for the Alpine Club of Canada's Berg Lake Camp in 1913.

A. 0. Wheeler began bargaining with the Grand Trunk Pacific railway and the Government of British Columbia to have a trail constructed up the Grand Fork of the Fraser to Berg Lake). Finally the B.C. Government agreed to pay the costs of having a trail built and Donald Phillips was awarded the contract.

After finishing the trail Phillips joined up with the Otto brothers to pack in the equipment for the Alpine Club's Berg Lake Camp. Prior to the camp and at A.0. Wheelers insistence, Mt. Robson was declared a Provincial Park, and the Deputy Minister of Public Works was at Berg Lake to welcome the Alpine Club to the newly established park. During the Berg Lake Camp the first successful assault on Mt. Robson was executed by Conrad Kain. As Kain descended to the camp, Curly Phillips declared that his previously believed "first assault" with George Kinney was not to the very summit of the mountain. In describing the climb later Kain, said (Canadian Alpine Journal First Ascent of Mt. Robson, 1913):

> *The view was glorious in all directions. one could compare the sea of glaciers and mountains with a stormy ocean. Mt. Robson is about 2,000 feet higher than all the other mountains in the neighborhood. Indescribably beautiful was the vertical view towards Berg Lake and the camp below. Unfortunately only fifteen minutes were allowed us on the summit, ten of pure pleasure, and five of teeth chattering. My rope and our damp clothes were frozen as hard as bone. And so we had to think of the long descent.*

With the ease of railway transportation many more mountain climbers, tourists and other people seeking recreation and business opportunities ventured into the Mt. Robson area. Late in 1915 the need for steel in war-torn France had increased and the Dominion Government ordered that steel from one of the duplicate GTP-CNR tracks through the Yellowhead be sent overseas. Most of the Grand Trunk's tracks were retained while most of the Canadian Northern's were torn up. By December of 1918 the Dominion Government had amalgamated the Canadian Northern, Grand Trunk Pacific, and other railways to form the Canadian National Railways.

The Yellowhead Highway

As soon as the First World War was over the idea for a Yellowhead Highway came to light. Fred Driscoll, one of the railway surveyors, suggested that the abandoned railway grade would make a fine foundation for a highway. Two groups seeking a medal offered by the Automobile Association of Canada, travelled the railway route with a Model T Ford and Overland Four. Both automobiles reached Victoria and both groups received medals for their unique expedition. Later this route through the Yellowhead was developed into what became known as the "tote road".

In 1923 a decision was made by the Canadian National railways to move the terminal from Lucerne, a town of over three hundred people, to Jasper. By 1924 just about everyone had moved to Jasper and the once pleasant town of Lucerne ceased to exist. Red Pass, however, became the new divisional point and began to grow.

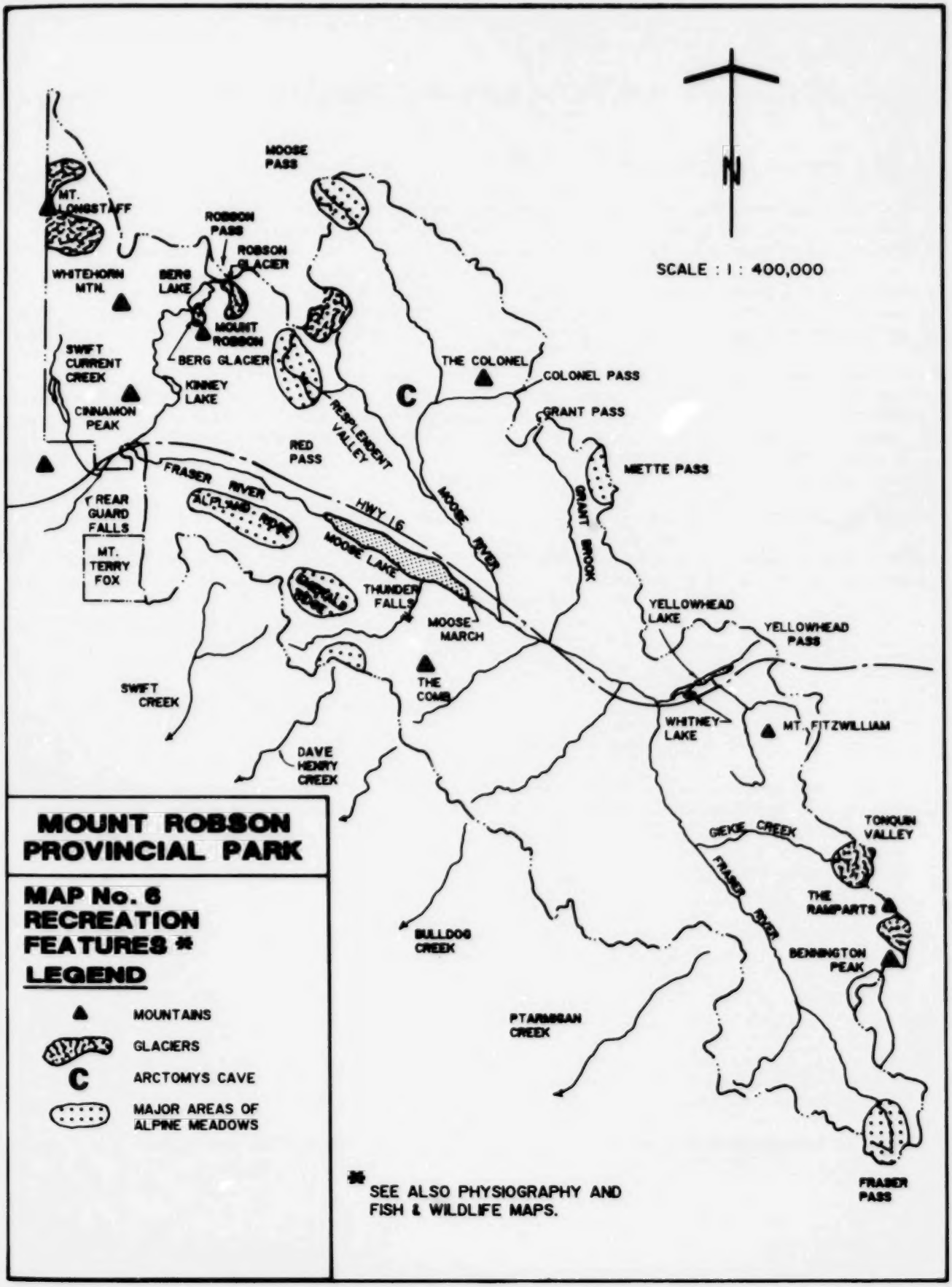
As the number of visitors into Robson valley increased, more people appreciated the area for recreation. Many of the old outfitters and guides (the Otto Brothers, 'Curly" Phillips, Fred Brewster, etc.), as well as the newcomers, did well. Then the Great Depression devastated tourism in the area as the flow of tourists slowed to a trickle and almost evaporated.

During the Second World War many Japanese were removed from their residences on the coast and relocated in internment camps, among them, Lucerne, Rainbow, Red Pass, Albreda, and Tete Jaune Cache. The men upgraded the abandoned railroad grade into a truck road and constructed additional new road over steep grades. By 1944 the 'tote road" was open. In August of 1948 a caravan of cars and trucks passed through the Yellowhead Pass from Edmonton to Kamloops.

After the war, the Trans Mountain Oil Pipeline company looked at the Yellowhead as a possible route for a pipeline from Edmonton to Vancouver. Construction began in 1952. During the construction of the pipeline much of the 'tote road' was damaged or completely destroyed.

By 1969, the tote road had been more or less reconstructed and paved. In August of 1970, the Premier of British Columbia, W.A.C. Bennett, officially opened, The Yellowhead Inter-provincial Highway. In 1987, B. C. Tel installed a fibre optics line adjacent to the highway, showing how land use in the highway corridor has changed with technological developments.

Since 1970 the number of visitors to Mt. Robson Provincial Park has increased from 22,246 to 300,000 in 1989. Most of these visitors are touring families and sightseers. Mt. Robson has also attracted backpackers, mountain climbers and other adventure seekers from all over the world.



MOUNT ROBSON PROVINCIAL PARK

MAP No. 6 RECREATION FEATURES *

LEGEND

- ▲ MOUNTAINS
- GLACIERS
- C ARCTOMYS CAVE
- MAJOR AREAS OF ALPINE MEADOWS

* SEE ALSO PHYSIOGRAPHY AND FISH & WILDLIFE MAPS.

4.0 VISUAL RESOURCES AND RECREATION FEATURES

4.1 VISUAL RESOURCES

Superb mountain scenery is one of the most common reasons why tourists visit the Rocky Mountain parks, and Mount Robson Park provides dramatic vistas in a variety of settings (Ministry of Tourism, Recreation and Culture, 1986). The Yellowhead Highway presents outstanding views of the mountain ranges which lie north and south of the Fraser River valley. The Mount Robson viewpoint, Mount Fitzwilliam and Yellowhead Mountain pull-outs are favourite viewing sites. Berg Lake and Mt. Robson together are the scenic highlights of the park, a classic Rocky Mountain setting equal to the more famous Lake Louise in its appeal.

Also of importance to the highway traveller, is the perception of rugged ridges, forested slopes and free flowing rivers as part of the scenic *wilderness*. The backcountry traveller in the park seeks out the wilderness setting, free of man's influence. A lack of evidence of timber harvesting, mining or other industrial activities from the backcountry viewpoints is an important part of the park's visual attributes.

4.2 RECREATION FEATURES

Mount Robson Provincial Park has many outstanding recreation features. These are described fully in the Outdoor Recreation Features Inventory (Lands, Parks and Housing, 1984). Mount Robson and the Ramparts, a chain of peaks straddling the provincial border, are nationally significant. Provincially noteworthy mountain peaks include Resplendent, Lynx and Whitehorn Mountains. In addition, peaks of regional topographic interest, such as Mount Fitzwilliam, are found here.

Provincially important alpine meadows, such as those in Fraser Pass, Tonquin Pass, Resplendent Valley and Miette Pass, are characterized by extensive alpine and sub-alpine vegetation, and outstanding viewing opportunities.

Lakes, rivers and the many waterfalls in the park add to the diversity of landscape features. Moose Lake and Yellowhead Lake both offer opportunities for boating and angling. Smaller lakes such as Whitney and Portal Lake provide an outlet for those seeking quiet walking or fishing in a more intimate setting. Many lakes, such as Berg or Kinney Lake are not used directly for activities, but are scenic features to appreciate for their own sake during hiking or riding trips.

The most important stream in the Park is the Fraser River, a river with the added dimension of history and colourful personalities attached to it. Overlander Falls provides a good viewpoint, while the nearby steep walled canyon rapids offer challenging kayaking or rafting for experts. Robson River is another stream of importance; between Berg Lake and Kinney Lake the river passes through the Valley of a Thousand Falls, a provincially significant waterfall landscape.

Wilderness is also a recreation feature, although not always classified as such on recreation inventory maps. Much of Mount Robson park provides a wilderness setting, which, in conjunction with the mountain wilderness of Jasper National Park, is nationally important.

The important recreation features of Mount Robson Park may be summarized as:

TABLE #4 MOUNT ROBSON RECREATION FEATURES

Nationally significant

Mt. Robson, Berg Lake, and associated glaciers.
The Ramparts, for their pinnacled rock formations overlooking Amethyst Lakes
Arctomys Cave, as the deepest cave in the Rocky Mountains
Wilderness, as it connects to the Four Mountain National Parks system.
Mt. Terry Fox as a memorial and viewpoint.

Provincially Significant

Valley of a Thousand Falls
Fraser River headwaters
Wildlife, in particular mountain goat, moose, elk and grizzly bear populations
Yellowhead Pass, history.
Archaeological and historic artefacts of transportation and settlement
Alpine meadows of Moat/Tonquin Pass area, Resplendent Pass, Fraser Pass, Miette Pass.
Peaks in or near Mt. Robson Group, including Resplendent Mt., Mt. Kain, Lynx Mt., Rearguard Mt., Whitehorn Mt., Mt. Longstaff., for their climbing interest
Peaks near The Ramparts, such as Turret Mt., Bennington Pk., Mastodon Pk., for their climbing interest.
Moose Lake marsh, wetland wildlife

Regionally significant, Rocky Mountains

Moose Lake, Yellowhead Lake
Overlander Falls
Rearguard Falls (outside park)
Kettle Ponds

Locally significant

Whitney and Portal Lakes for fishing
Numerous cirque basins, small glaciers
Wildlife, local populations of furbearers, predators, avifauna.

5.0 SUMMARY OF RESOURCES ADJACENT TO THE PARK

5.1 MT. TERRY FOX RESOURCE SUMMARY

Mt. Terry Fox Park was established in memory of the one legged runner who captured the hearts of people around the world with his attempt to run across Canada, raising funds for cancer research. The park is located adjacent to and west of Mt. Robson Park, and just south of the Mt. Robson viewpoint. The park encompasses an area of about 1,900 hectares, located above 1,500 m in the Selwyn Mountain Range. This range is the westernmost part of the Rocky Mountains, with Mt. Terry Fox rising to an elevation of 2,651 m.

The natural resources are similar to adjacent areas in Mt. Robson Park, but Mt. Terry Fox is part of the eastern slopes of the Rockies, not completely represented in Mt. Robson Park. Landforms are typical of the eastern slopes, with a small glacier on the north side of Mt. Terry Fox, and steep, V-shaped creek valleys. Three small alpine lakes, with small adjacent meadows form the headwaters of these creeks.

Much of the park lies in the Englemann Spruce- Subalpine Fir biogeoclimatic zone, with upper reaches in alpine tundra. The park is important for wildlife, particularly goats that use south facing slopes for winter range.

The park's main visual interest is as a natural monument to the memory of Terry Fox; interpretive signs focus on the peak. The two viewpoints from which Mt. Terry Fox is visible, are not in the park, but the viewscape from these points is a critical part of park appreciation. Recreation features include the rugged rocky ridge forming Mt. Terry Fox, and the small creeks, glaciers, and lakes nearby. These features are of local significance in themselves, meaning that other similar features are common nearby.

5.2 REARGUARD FALLS RESOURCE SUMMARY

Rearguard Falls is a Crown land U.R.E.P. set aside for the Use Recreation and Enjoyment of the Public. It is a candidate for park status. Rearguard Falls are located on the Fraser River downstream from Mount Robson Park. The falls are adjacent to the Yellowhead Highway, providing an accessible and pleasant viewing and rest stop. The falls plunge over a five metre ledge set in a forested canyon. Few fish other than migrating salmon make it up over the falls. The terminus for salmon spawning on the Fraser River is just upstream at Overlander Falls in Mount Robson Park.

Vegetation belongs to the Interior Cedar Hemlock biogeoclimatic zone, with much of the area supporting young stands of mixed forest. The site protects a small portion of the Fraser River valley bottom at a lower elevation and further west than in Mt. Robson Park. The site's conservation role is mainly to preserve a regionally significant scenic feature, yet it protects part of the east-west cross-section of the Rockies traversed by the Fraser River.

5.3 LANDS ADJACENT TO MOUNT ROBSON PARK

To The East

The natural resources of Jasper National Park are well documented elsewhere (Jasper National Park Management Plan, 1988). The continental divide forms the boundary between the two parks, with drainage running roughly east and west or north away from the divide. The environment in the westernmost portion of Jasper National Park is similar to the eastern part of Mt. Robson Park. Vegetation in Jasper Park is comparable, for example, but grows in the drier rainshadow conditions found on the east side of the divide.

Resources in Jasper that affect management of Mt. Robson Park are migrating wildlife, and the proximity of destination recreation features in Jasper Park. Wildlife, such as caribou, grizzly and black bear, moose, and elk migrate across park boundaries. The Tonquin Valley and Amethyst Lakes, next to the southern and most remote part of Mt. Robson Park, are among the most heavily used areas in Jasper Park backcountry. Robson Pass, north of Berg Lake, is also a destination for many Jasper park users. The main recreation feature there, however, is Mt. Robson.

To The West

The resources west of Mount Robson Park are described in the 1983 Deferred Area Plan for the Robson Valley, and are further detailed on Ministry of Forests inventory maps for the lands further north and south toward McBride and Valemount. More recent Local Resource Use Plans, in preparation, also contain information on the area. Resource highlights are summarized here.

The mountain ranges to the west of the park support immature to mature forests adapted to the moist east facing slopes. These slopes drain to the Rocky Mountain Trench, with the Fraser River collecting this water. Lower elevation valleys are in the Interior Cedar Hemlock or Sub-Boreal Spruce subzone, with upper elevations above 1,300 metres, in the Engelmann Spruce-Subalpine Fir and ultimately, Alpine Tundra zones. Spruce and balsam are the predominant species, with lesser amounts of cedar, hemlock and lodgepole pine. Sites with good to medium forest productivity are found in many of the valleys.

Wildlife species composition is similar to Mount Robson Park, although hunting, proximity to timber harvesting, and wetter habitat conditions likely affect wildlife use. Goats are known to inhabit the south and west-facing slopes of the Selwyn Range. In particular, they are found in the vicinity of Mt. Chamberlain and south of the Fraser River towards Swift and Dave Henry Creeks. Chinook salmon spawn in the Fraser River, and Dolly Varden and Rainbow Trout are also present. Productivity of smaller streams entering the Rocky Mountain Trench is low, and fishing is poor.

The recreation values from Holmes Creek south to Mount Chamberlain, Swiftcurrent Creek and towards Ptarmigan Creek have been called moderate to high, with local and regional significance (Recreation Feature Inventory 1984, and Mount Robson Deferred Area Plan, 1983). Mountains and ridges are more subdued than the Robson Group, although a large glacier is located south of Mount Longstaff. These mountains, attractive ridges, small alpine lakes, glaciers, and forested valleys are used by local and regional visitors for hiking, skiing, climbing, and hunting. Recreation use south of the Fraser River is limited by steep, heavily forested slopes.

The highest recreation values are found in the Fraser River valley, mainly related to viewing. Mount Chamberlain is also rated highest due to its goat population. Valley slopes on both sides of the Fraser River west of the park boundary have been called highly sensitive in the Deferred Area Plan visual analysis (Ministry of Lands Parks and Housing, Ministry of Forests, 1983).

Hiker approaching Berg Glacier on the way to Berg Lake.

6.0 RESOURCE ANALYSIS

6.1 MT. ROBSON ECOSYSTEM

Mount Robson Park, (along with Mt. Assiniboine and Hamber Parks), has been nominated as a World Heritage Site next to those already established in Banff, Jasper, Kootenay and Yoho National Parks. As a park representing the Rocky Mountain landscape and ecosystem, Mount Robson is globally important. The influence of man in the context of evolving natural processes in these World Heritage Sites is a management challenge; both to identify what the influences are, what affect they have on the ecosystem, and what management is appropriate.

Wilderness is an important part of the Mount Robson ecosystem, playing a role in sustaining wilderness-dependent species such as grizzly bear, as well as supporting human needs for solitude and recreation.

6.2 SOILS AND WATER

Land suitability for park development depends in part on soil drainage characteristics, texture, stability, and chemical composition. Fine textured soils, such as silt, are prone to erosion whereas coarse gravels or sands are better able to withstand use and development. Wet organic soils found in many alpine areas, or around the Moose Lake marsh are poorly suited to trail development or other facilities. Detailed soil maps for Mount Robson Park are unavailable, hence site soil surveys would help assess development suitability.

Soil erosion or degradation in the park may be caused by overuse of trails, or excessive soil compaction at campsites. Horse or mountain bike use, for example, may accelerate erosion on steep trails. The reconstruction of the Berg Lake trail has reduced the possibility of soil erosion. The day hiking area immediately around Berg Lake consists of sparsely vegetated gravel flats, very resistant to high use levels.

Mount Robson Park has good water quality. Increased recreation use at Berg Lake, Kinney Lake, or at other smaller alpine lakes could lead to higher coliform levels. Giardia (known as 'beaver fever') is always a concern in backcountry settings. Water quality at Berg Lake could be affected by campers too close to waters edge, although toilets are located well back. Ranger patrols and education help to reduce the discharge of wastes into Berg and Kinney Lakes.

6.3 VEGETATION RESOURCES

Much of the forest in Mount Robson Park has burned in years past, with stands of lodgepole pine flourishing after these fires. Fires have been suppressed during the last several decades, with no large burns experienced. Fire suppression has influenced the evolution of the forest and changed the pattern of habitat available for wildlife, in particular winter range for ungulates. Park forests are slowly changing towards old-growth due to fire suppression. The use of campfires in high alpine and subalpine areas depletes firewood supplies and could rob the soil of future nutrients.

The vegetation in Mount Robson has also been further modified by man, from transportation, pipeline, and communications rights-of-way. These influences are seen mainly along the Yellowhead Highway. Revegetation of disturbed rights-of-way with domestic grasses has

attracted wildlife. Better viewing opportunities have resulted, but the possibility of increased road kills is a concern.

Mountain pine beetles have infested portions of the Mount Robson Park forest. Removal of infected trees by helicopter has been carried out in co-operation with the Ministry of Forests. Management of insect infestations is related to other park resources, such as scenic quality. Removal of infested trees helps prevent loss of merchantable timber outside the park.

Sensitive alpine meadows are found in several mountain passes in the park. Impacts of recreational use on these meadows have not been assessed recently, although deterioration of the meadows is not apparent (H. Roemer conducted a study of recreation impacts on vegetation at Berg Lake in 1975). The intensively used Berg Lake campground is situated in forest, while much of the surrounding terrain consists of very resistant fluvial gravels and moraine. Recreational impacts are more noticeable in the Adolphus Lake area (in Jasper), where wet meadows show evidence of use. Forest vegetation in Berg Lake is affected by soil compaction around trees and by the slow denudation of groundcover and shrubs around the campsites. These impacts have not been measured, and may be more of a potential aesthetic than ecological concern. The vegetation at newly renovated campsites with raised gravel pads, for example at Kinney Lake, shows no signs of deterioration. Horse parties are required to carry pellets, so that little impact on vegetation resources from grazing is likely.

6.4 WILDLIFE RESOURCES

Wildlife migrate between Mount Robson Park and Jasper, and across the western boundary along the Selwyn Range. The shared boundary with Jasper has few management implications, other than the potential for increased recreation use at sites such as Amethyst Lakes. Some animals such as grizzly bear, could be displaced by more people in the backcountry. Of greater importance is the wildlife inhabiting the western boundary area. Goat populations are noteworthy along the ridges of the Selwyn Range. As timber harvesting proceeds in some of the valleys west of the park, road access may result in increased hunting activity. The prospect of easier access into the park for poaching is also a concern.

The grizzly bear population in the park is thought to be moderate (limited by habitat, not necessarily by man), with greater concentrations in the wilderness of the Fraser River headwaters and Moose Creek. These areas are less well travelled by park visitors, and bear-human conflicts are minimal. With possible future increased use of the Moose Lake trail by horses, or if loop trails in Mt. Fitzwilliam or Fraser River are connected to the Tonquin Valley in Jasper, bear populations could be affected.

Bear-human conflicts with respect to trail and campsite locations were assessed by McCrory and Mallam (1989). They stated that bear hazard is a combination of habitat, visibility, proximity to noisy creeks, history of bear sightings and problems, and amount and type of visitor use. Many park trails pass through prime seasonal habitat, for example where bears eat roots, corms or berries. Trail re-routing and maintenance, and campsite relocation, were recommended where the potential for conflict is greatest. The study suggested discouraging use of the upper part of Yellowhead Mt trail, and changes to parts of the Moose River trail, and the unfinished Red Pass trail. Since the Mt. Fitzwilliam basin and trail route has lower quality bear habitat and high recreation potential, the study recommended further development as a backcountry destination.

Wildlife viewing opportunities will be greatly enhanced by the proposed Moose Lake Marsh trail and interpretive developments. Wildlife disturbance and safety questions arising from increased viewing activities may be a management concern in future. For example, trail routes

The sculpted wood park entrance sign is a landmark in itself, encouraging visitors to stop at Portal Lake, as they approach the park from the east.

Berg Lake, Berg Glacier and Mount Robson together form the scenic highlight of the park. Most backcountry travel in the park is in the Kinney Lake-Berg Lake area.

located on moose trails at Moose Lake Marsh could lead to conflicts; careful planning will avoid this type of problem (Mol,1989).
McCrory and Mallam (1989), suggested moving the upper campsite in the Mt. Fitzwilliam area, to reduce the potential harassment of goats by feeding or approaching too closely. This was done in 1990.

6.5 CULTURAL HERITAGE

Archaeological resources are secure provided the ground is not disturbed. Archaeological assessment prior to any development would avoid potential loss of these resources. The location of archaeological sites is not marked on public maps.

6.6 MT. TERRY FOX RESOURCE ANALYSIS

There are no known resource use questions within the Mount Terry Fox Park boundaries. The park is viewed from Highway #5 and #16, however, and timber harvesting or other resource development between the viewpoint and the park boundaries could affect visual quality. Resource use in the lower part of Terry Fox Creek would have the greatest potential for affecting the Highway #16 rest stop viewscape. Similarly, timber harvesting in Hogan Creek could affect the viewscape from the Highway #5 rest stop. The distinctiveness of Mount Terry Fox as a memorial would be compromised if the viewscape quality deteriorated due to timber harvesting or other resource activity. Landscape logging techniques (ways to modify cut block design and location) to reduce visual impacts could offset the negative effects.

6.7 REARGUARD FALLS RESOURCE ANALYSIS

There are no current resource use questions within the Rearguard Falls Reserve, although interest in placer mining on the south side of the river has been expressed in the past. (Rearguard Falls is a Crown land U.R.E.P. set aside for the Use Recreation and Enjoyment of the Public. It is a candidate for park status). The viewscape in the park is focussed on the falls and immediate valley, although vistas to nearby ridges are present. Timber harvesting too close to the boundary of the Recreation Area could affect its visual quality. The use of landscape logging techniques on more distant slopes could help reduce any potential affects on this recreation site.

6.8 RESOURCE ANALYSIS OF LANDS ADJACENT TO THE PARK

Jasper National Park

Expansion of recreation opportunities in the national park has benefited Mount Robson, through increased exposure, increased use and complementary programs. Recent initiatives as part of the Four Mountain (National) Park planning program reveal little change of management philosophy for Jasper. If recreation use and tourism increase in the Mountain Parks, use of Mount Robson will also grow.

Because of its size, Jasper National Park is capable of absorbing and dispersing use better than Mount Robson Park. Most of the more popular backcountry destinations of Jasper do not affect the nearby provincial park. Three areas in Jasper Park affect Mount Robson Park use:

Jasper cont'd.

- Amethyst Lakes, which border Mount Robson Park at the head of Tonquin Creek (upper Fraser River). The promotion that this area receives in National Park hiking guides, may lead to increased demand for a circle route leading into the Mount Fitzwilliam area.

- Robson Pass straddling the two parks, where horse parties of ten arrive from the Smokey River in Jasper Park with only their National Park permit to show.

- Whirlpool River trail use in Jasper Park, could lead to increased use of the Fraser Pass at the extreme south end of Mt. Robson Park.

Western Boundary of Mount Robson Park

The lands to the west of the park entrance have been previously assessed for their resource potential, including as a possible addition to the park. The entire area was part of a Deferred Planning Area (1983). Most of these lands are allocated by Forest Licence as part of the Annual Allowable Cut in the Timber Supply Area within the Provincial Forest. Planning is completed with public involvement and referrals to affected government agencies.

Forest Harvesting

A Mt. Robson Corridor Local Resource Use Plan (L.R.U.P), now in preparation by the Ministry of Forests, replaces earlier efforts to manage lands in this corridor. It will be completed in 1991. Aesthetic values are high as people approach Mount Robson Park, with Rearguard Falls, the Mt. Terry Fox viewpoint, and the Swiftcurrent Creek Valley focal points for sightseeing and recreational activity.

A Tete Jaune Cache L.R.U.P. will be completed in 1990. Forest values are high to the west of the park, and harvesting has occurred in several drainages, such as Holmes Creek (several years ago), and more recently the lower reaches of Ptarmigan Creek. Timber harvesting is planned over a twenty year time frame for the drainages west of the park. Five year harvesting plans have been prepared for Ptarmigan Creek, with up to 1/3 to be taken in each pass. These wood volumes have been awarded to Slocan Forest Products. Second cutting passes will not be done until 'green-up' of reforested sites, about 5 years after the first cut.

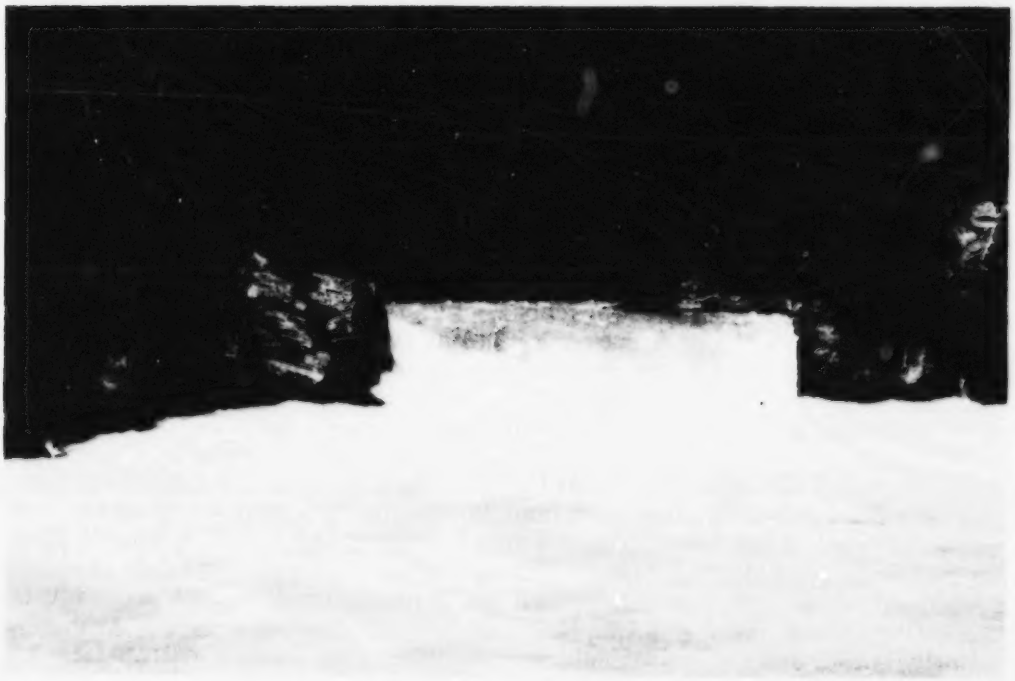
Logging is scheduled for upper Ptarmigan Creek in 1992. Roads from these operations will come within a few kilometres of the park boundary. Some cut blocks would be visible from the park and from ridges in the Tonquin Valley area of Jasper National Park. Smoke from slash burning, and noise are potential concerns. Easier access to the park boundary could also result in increased wildlife poaching or recreational use by mechanized vehicles in the winter months.

Hauer Brothers Ltd. of Tete Jaune Cache have applied to log the Swiftcurrent Creek valley, including the north slopes of Mt. Chamberlain. The upper Swiftcurrent Creek drainage has been logged and placer mined in the past. Road access, probably following the old road route through a corner of the park would be needed to access this timber. A road already extends to the park boundary, and the valley is used by local residents and visitors for a variety of recreational activities. Wildlife values are high in the Mount Chamberlain area since goats use the south slopes as winter range. Holmes Creek has been logged in the past, but there are no plans to harvest timber in the near future along this northwestern edge of the park.

Recreation and Resource Use

The main role of these lands with respect to Mount Robson Park is as a buffer to the Berg Lake-Mount Robson Area. Users of the Berg Lake area who travel to the ridges between Mount Phillips and Cinnamon Peak would see timber harvesting on the north side of Mount Chamberlain or in and adjacent to the Swiftcurrent Creek valley.

The western slopes of the Selwyn Ranges are used for a variety of recreational activities, such as hunting, backcountry hiking and skiing. The use of these areas, for example the cabin at the headwaters of Dave Henry Lake, affects resources in the park. Access to Alpland and Emerald Ridge is possible from the western park boundary. Helicopters are used to gain access to recreation features west of the park. Applications for heli-skiing licences in the Selwyn Range, west of the park, have been submitted. A commercial recreation plan is being prepared by the Ministry of Crown Lands for the area west of Mt. Robson.



Overlander Falls is accessible by a short trail from the highway. A riverside trail extends downstream from here to the Robson Meadows campground.

7.0 LAND TENURES, OCCUPANCY RIGHTS AND JURISDICTIONS

7.1 INHOLDINGS AND OTHER TENURES (See Appendix 1 for details)

Mount Robson Park has been an important transportation corridor for a long time, resulting in many varying land rights and uses throughout. Early attention to tourism and the recreation features of the park resulted in private lots, and guiding territories throughout the park.

No mineral claims are located in the park. There are no leases or guide-outfitting territories. Water rights are held by CN Railway, Transmountain Pipeline, Thomas Carr and Mount Robson Park.

Eight parcels of land are held in fee simple ownership by Transmountain Pipeline Co. and C.N. Railway. Fifteen separate rights-of-way agreements are in place for C.N. Railway, Transmountain Pipeline Co., B.C. Hydro, B.C. Tel and the Ministry of Highways. All rights-of-way are in the highway corridor.

7.2 PARK USE PERMITS (See Appendix 1)

About 30 Park Use Permits (PUP) are held in the park for uses such as recreational guiding or gravel extraction. PUP's allow permittees to undertake activities that would not otherwise be allowed in the park.

7.3 TRAPLINES (See Appendix 1)

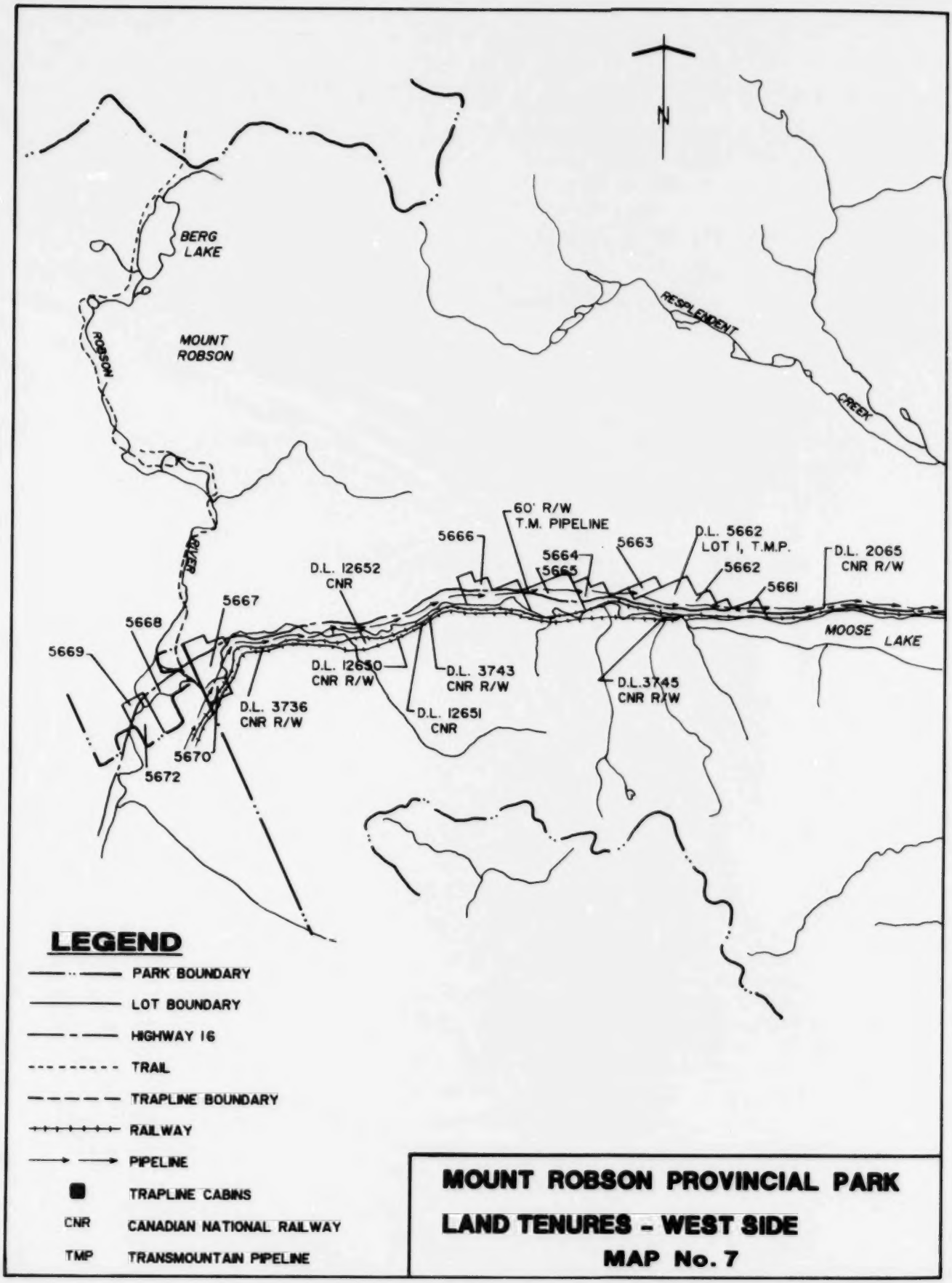
One trapline remains in the park. The Ministry of Parks has the first right of refusal to buy out the trapline should it be sold. Current policy is to terminate traplines in parks, if possible as they come up for sale.

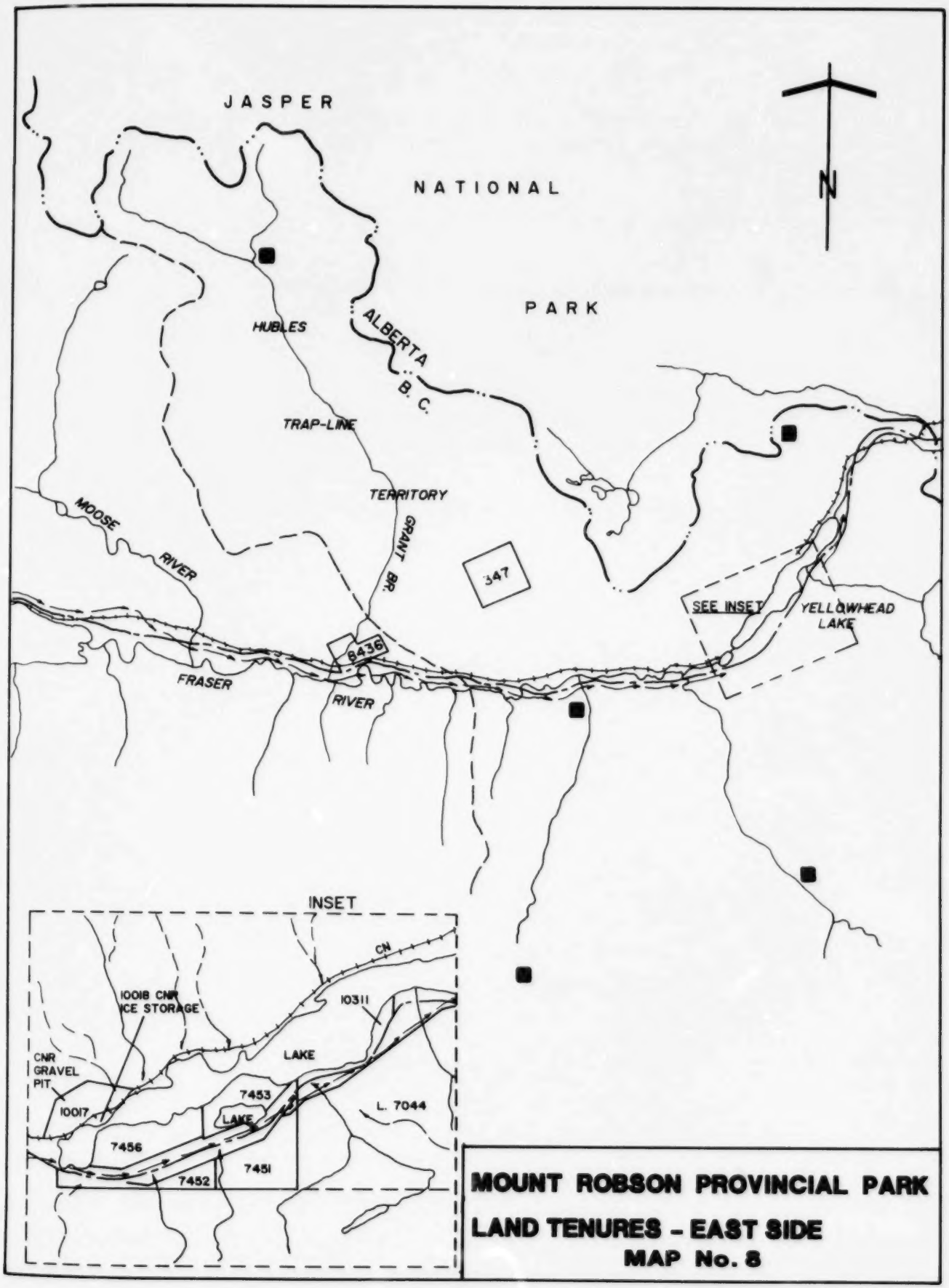
7.4 SUMMARY OF TENURES ADJACENT TO THE PARK

Jasper National Park lies to the east and north of Mount Robson Park. To the west, provincial crown lands are managed by the Ministry of Forests, McBride District. These lands are in a timber supply area within the Provincial Forest, where companies acquire rights to harvest timber, under a forest licence system.

Valley bottom lands are in the jurisdiction of the Fraser Fort George Regional District, where land use zoning may be used to manage certain types of development. Land ownership and use in valley bottoms outside the park is complex. Refer to planning documents such as the Mt. Robson Deferred Area Plan, Local Resource Use Plan, or Regional district plans for further information.

Privately owned backcountry huts are located at the headwaters of Dave Henry Creek, and an application for a hut on Swift Creek has been approved. These sites are leased from the crown and managed by the Ministry of Crown Lands. Applications for further huts in the southwestern part of the park are pending.


N
BERG LAKE
MOUNT ROBSON
ROBSON
RIVER
RESPLENDENT
CREEK
60' R/W
T.M. PIPELINE
5666
5664
5665
5663
D.L. 5662
LOT 1, T.M.P.
5662
5661
D.L. 2065
CNR R/W
MOOSE LAKE
D.L. 12652
CNR
5667
5668
5669
D.L. 12650
CNR R/W
D.L. 3743
CNR R/W
D.L. 3745
CNR R/W
D.L. 3736
CNR R/W
D.L. 12651
CNR
5670
5672
LEGEND
PARK BOUNDARY
LOT BOUNDARY
HIGHWAY 16
TRAIL
TRAPLINE BOUNDARY
RAILWAY
PIPELINE
TRAPLINE CABINS
CNR CANADIAN NATIONAL RAILWAY
TMP TRANSMOUNTAIN PIPELINE
MOUNT ROBSON PROVINCIAL PARK
LAND TENURES - WEST SIDE
MAP No. 7



MOUNT ROBSON PROVINCIAL PARK

LAND TENURES - EAST SIDE

MAP No. 8

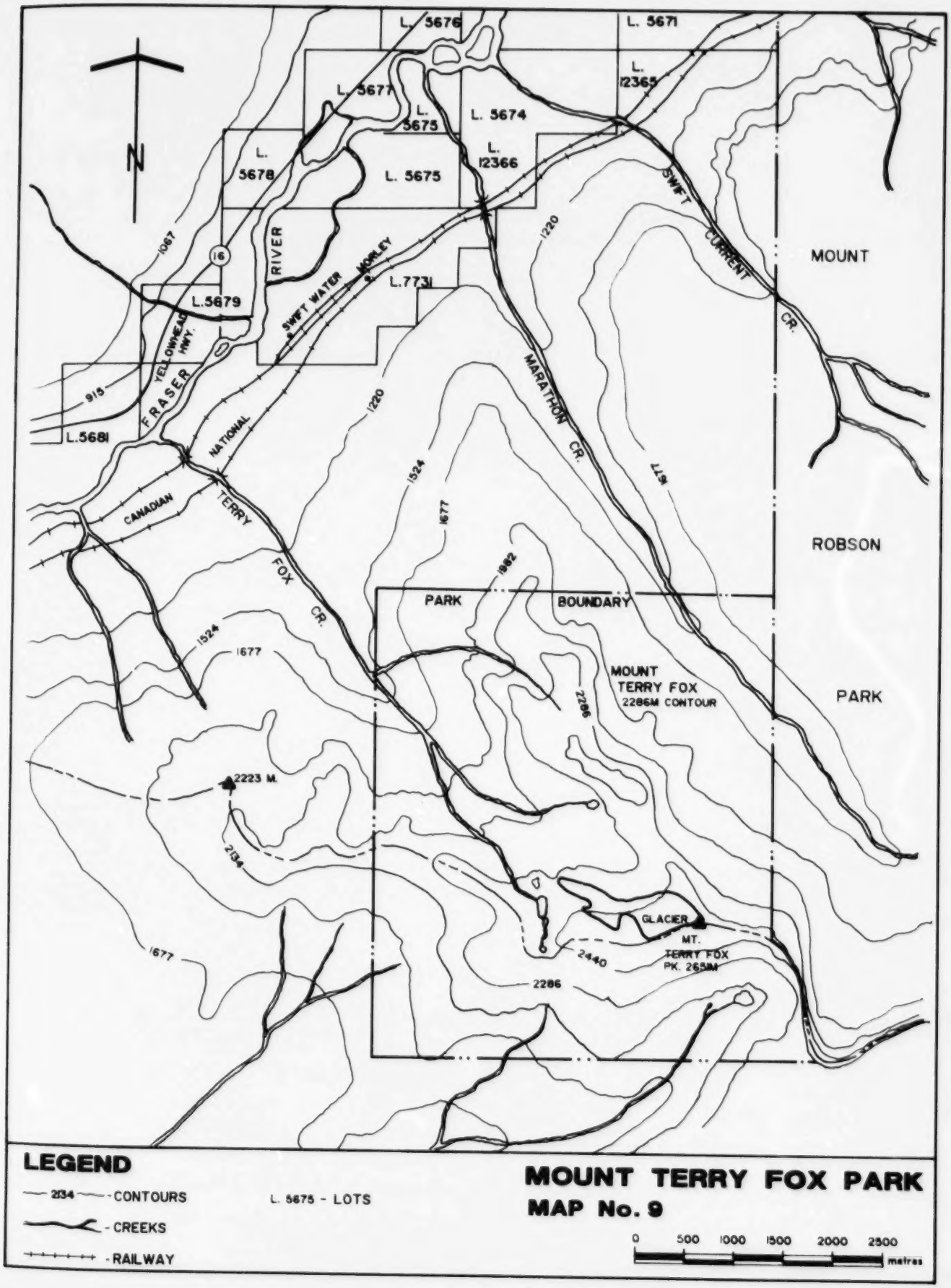
The eastern slopes of the Selwyn Range are under application for a heli skiing licence, operating out of Valemount. The applicant's proposed area extends from Mt. Longstaff south to Ptarmigan Creek.

7.5 MT. TERRY FOX SUMMARY (See also Map #9)

Mount Terry Fox was designated a Class A Park on June 23, 1982. There are no encumbrances in the park. The Ministry of Highways manages the two park viewpoints.

7.6 REARGUARD FALLS SUMMARY (See also Map #10)

Rearguard Falls is a Crown Land Reserve. (U.R.E.P. for the Use, Recreation and Enjoyment of the Public). It is a candidate for Provincial Park designation. There are no encumbrances in the Reserve.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16
RIVER
SWIFT WATER
MORLEY
L.7731
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YELLOWHEAD HWY.
FRASER
915
L.5681
NATIONAL
CANADIAN
TERRY FOX CR.
1220
SWIFT CURRENT CR.
MOUNT
MARATHON CR.
1524
1677
1982
ROBSON
PARK
BOUNDARY
MOUNT TERRY FOX
2286M CONTOUR
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PARK
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2134
GLACIER
MT. TERRY FOX PK. 2651M
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LEGEND
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L. 5675 - LOTS
- CREEKS
- RAILWAY
MOUNT TERRY FOX PARK
MAP No. 9
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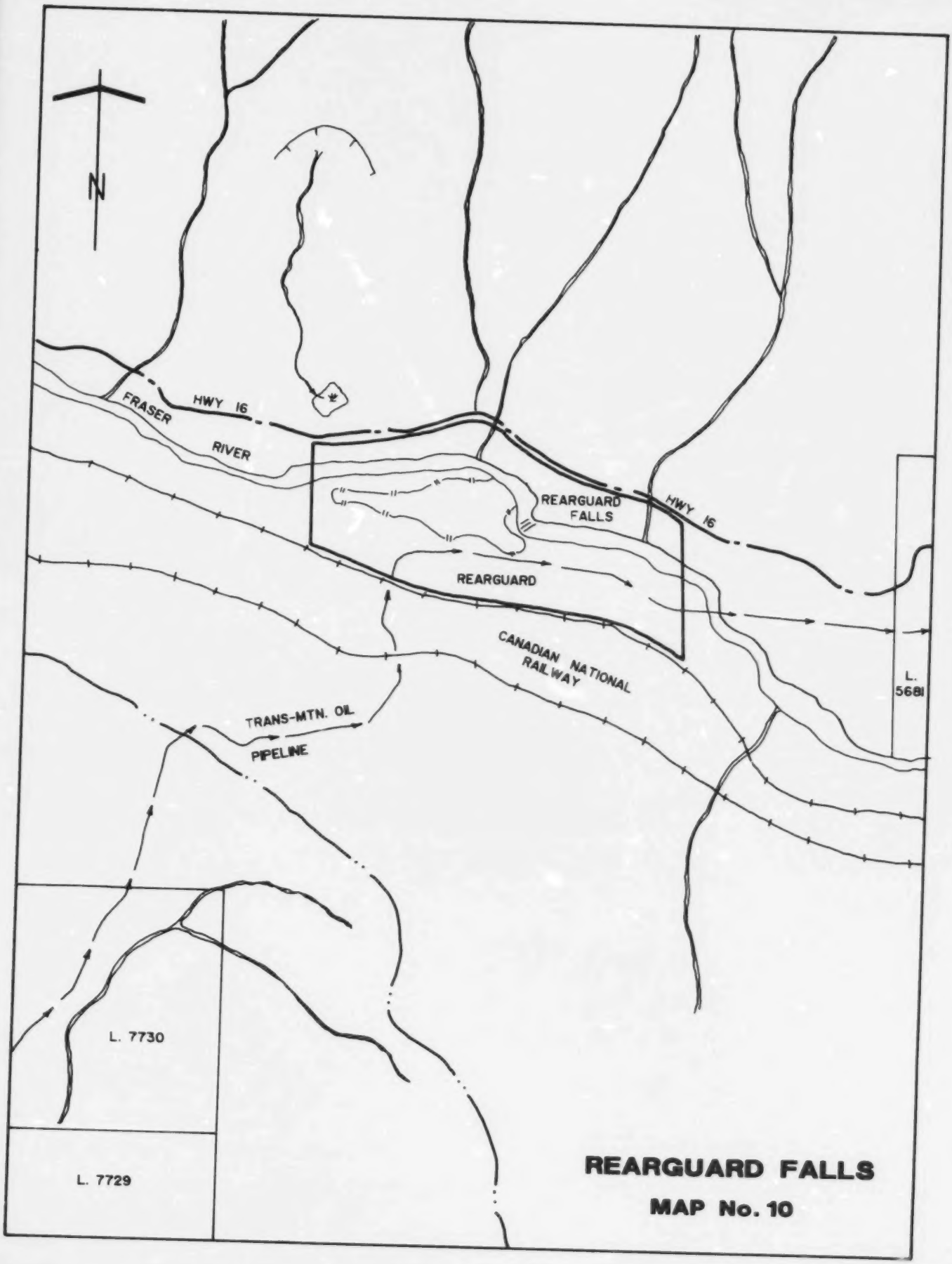
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PIPELINE
L. 7730
L. 7729
REARGUARD FALLS
MAP No. 10

8.0 EXISTING FACILITIES, DEVELOPMENT AND RECREATION OPPORTUNITIES

8.1 FACILITIES IN THE PARK (See also Map #11)

Trails and Roads

Although the main access to Mount Robson Park is by Highway 16, several roads extend to the boundary from outside the park. To the north, roads in two valleys permit height-of-land access to Carcajou Pass and the Smoky River Trail in Jasper National Park. From within Jasper Park there are trails in the Smoky, Miette and Snake Indian Rivers, as well as Meadow and Tonquin Creeks; all of these trails direct horse and hiker traffic into Mount Robson Park.

Access roads to gravel pits, rights-of-way, and to Lucerne area are usually gated. A gated service roads extends from the Robson River parking lot to Kinney Lake.

Berg Lake Trails

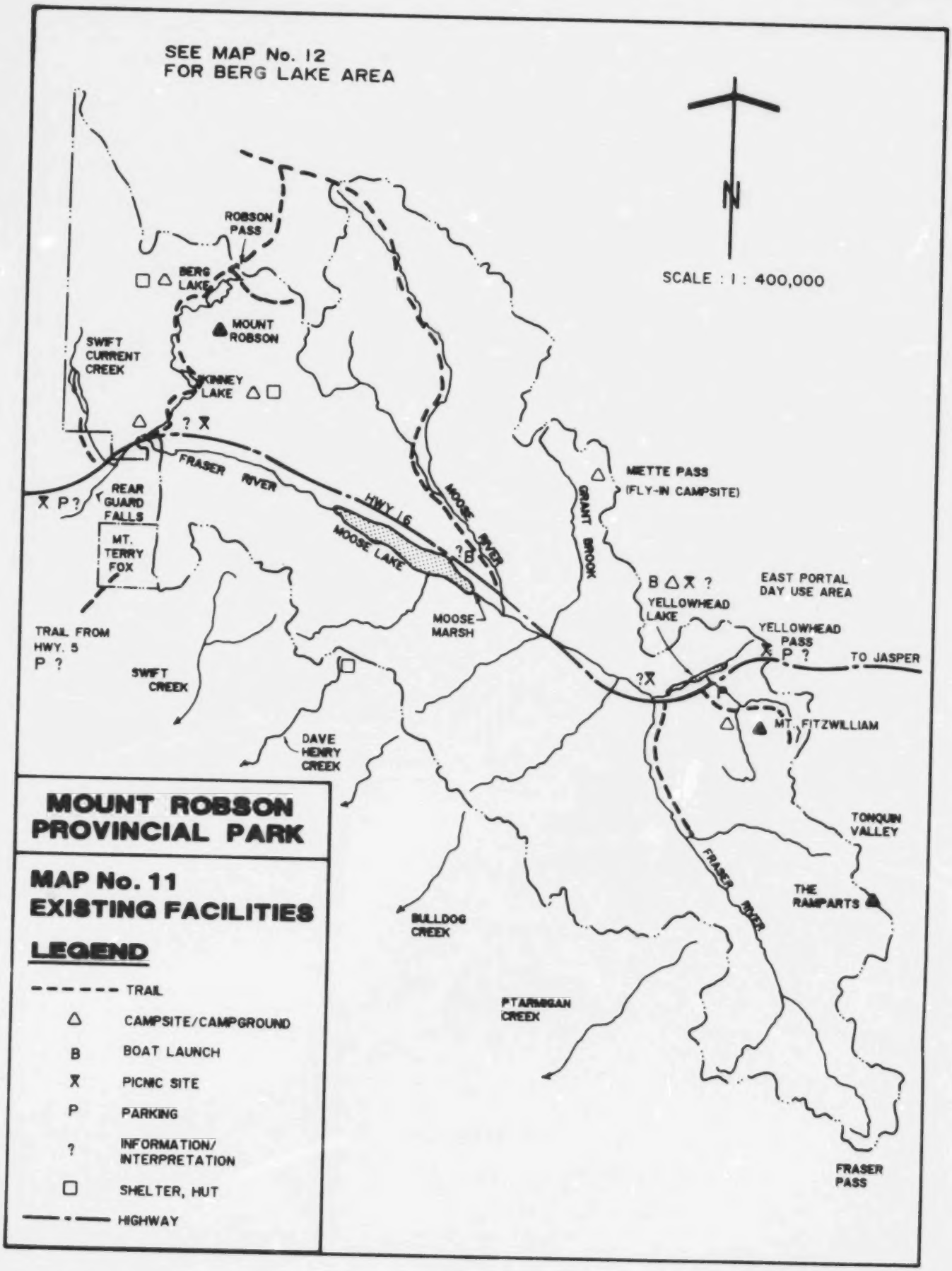
The Berg Lake trail was recently upgraded with improvements in routing and drainage. The day use trails in the vicinity of the lake have been retained at a less developed standard. The trails are regularly maintained.

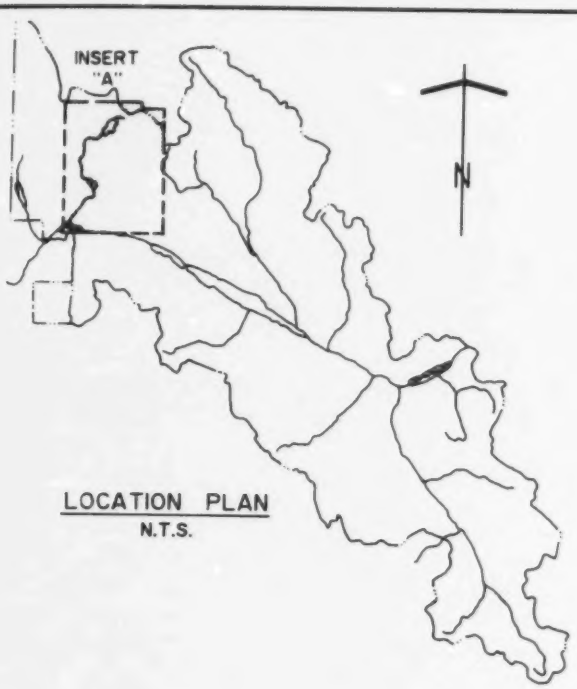
- Kinney and Berg Lakes hiking, horse, and biking trail, 20km total; (biking to White Falls only, service road as far as Kinney lake);
- side trails to viewpoints at falls in Valley of a Thousand Falls;
- Toboggan Falls Trail, with a treeline route north and down to Robson Pass, 2-4 km;
- Snowbird Pass Trail, 8 km;
- Hargreaves Lake Trail, 2 km;
- Trail to Adolphus Lake and into Jasper National Park, 1 km;

Other Backcountry Trails and Routes

These trails are brushed out annually or biannually. Park rangers occasionally brush out the remote routes, for example on the upper Fraser River. The Mount Fitzwilliam Trail was recently upgraded for the first 6km. The Moose River and Fraser River trails frequently pass over gravel flats, but the routes are marked.

- Mount Fitzwilliam Trail - 6 km good trail, 5 km rough trail;
- Moose River trail - rough 35 km trail to Moose Pass;
- Fraser River Trail - rough, unmaintained 25 km trail and route;
- Swiftcurrent Creek- partly on old road, then route only, on creekbed;


SEE MAP No. 12
FOR BERG LAKE AREA
N
SCALE : 1 : 400,000
ROBSON PASS
BERG LAKE
MOUNT ROBSON
SWIFT CURRENT CREEK
KINNEY LAKE
FRASER RIVER
HWY 16
MOOSE RIVER
MOOSE LAKE
REAR GUARD FALLS
MT. TERRY FOX
TRAIL FROM HWY. 5
SWIFT CREEK
MOOSE MARSH
DAVE HENRY CREEK
MEETTE PASS
(FLY-IN CAMPSITE)
GRANT BROOK
EAST PORTAL
DAY USE AREA
YELLOWHEAD LAKE
YELLOWHEAD PASS
TO JASPER
MT. FITZWILLIAM
TONQUIN VALLEY
THE RAMPARTS
FRASER RIVER
BULLDOG CREEK
PTARMIGAN CREEK
FRASER PASS
MOUNT ROBSON PROVINCIAL PARK
MAP No. 11
EXISTING FACILITIES
LEGEND
TRAIL
CAMPSITE/CAMPGROUND
BOAT LAUNCH
PICNIC SITE
PARKING
INFORMATION/ INTERPRETATION
SHELTER, HUT
HIGHWAY

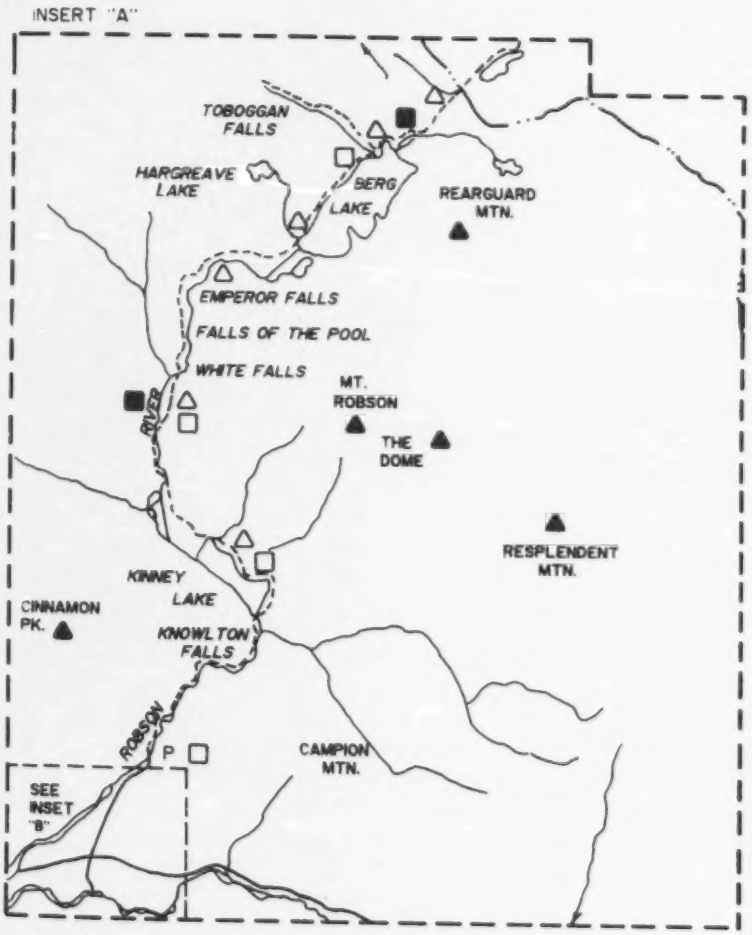


LOCATION PLAN
N.T.S.

VISITOR CENTRE AREA

LEGEND

- TRAIL
- WARDEN CABIN
- SHELTER
- CAMPSITE/CAMPGROUND
- P PARKING
- PICNICING
- S SANI-STATION
- MOUNTAIN



BERG LAKE AREA
N.T.S.

MOUNT ROBSON PROVINCIAL PARK

BERG LAKE & VISITOR CENTRE FACILITIES

MAP No. 12

Day Use Trails

- Overlander Falls trail- 500m trail to falls;
- Fraser River Trail between Robson Ranch bridge and Overlander Falls, 2 km;
- Loop trail along Fraser river from Robson Meadows Campground;
- Yellowhead Mountain Trail - 4 km rough trail, half-way viewpoint;
- Portal Lake Trail - 1km;
- Lucerne Campground Trail- 1km trail with signs;
- Viewpoint Trail at the Robson Viewpoint, newly constructed, connections to Overlander Falls trail, 2 km;
- Red Pass trail, largely overgrown, now closed;

Campgrounds and Accommodation

A total of 177 vehicle campsites plus the 80 campsites along the Berg Lake Trail provide the bulk of the accommodation facilities in the Park. Several less formal campsites provide opportunities for backcountry travellers while private facilities such as Robson Ranch and Emperor Ridge campground outside the Park provide cabin-style and campground accommodation.

- 8 designated campgrounds along the Berg Lake trail, accommodating 81 overnight parties;
- horse corral and camping area in Robson Pass;
- Ralph Forster climbing hut on the lowers slopes of Mt. Robson;

- Robson Meadows Campground - 125 units;
- Robson River Campground - 19 units;
- Lucerne Campground - 32 units;

- Moose River group campground (no longer used);
- Ranger cabins at Whitehorn and Berg Lake, not open to public;

- Robson Ranch (private) -6 units, 8 campsites;
- Emperor Ridge Campground (private) -37 campsites;
- Robson Shadows (private) -8 units, 45 campsites
- Mt. Robson Lodge (private) -8 units

Viewpoints and Day Use Areas

- Main Mt. Robson Viewpoint area, including Visitor Centre;
- Overlander Falls day use area and trail;
- Berg Lake Chalet, day use shelter;
- Kinney Lake, Whitehorn day use shelters on Berg Lake trail;
- Moose Lake boat launch;

- Mount Fitzwilliam (known as Fraser Crossing), picnic area and viewpoint;
- Yellowhead Lake boat launch and picnic area;
- East portal picnic area and day use trail;

8.2 FACILITIES OUTSIDE THE PARK; REARGUARD FALLS, MT. TERRY FOX;

Trails and Roads

- Mt. Terry Fox day use trail, from Hwy. 5; trail route from Hwy. 16 has been investigated, river crossing and terrain difficulties;
- Rearguard Falls trail;
- Swiftcurrent Creek access road and creek bed hiking route;
- Lost Lake Trail, on Hwy 16 east of Tete Jaune Cache;
- Holmes River road extending close to park boundary;
- Ptarmigan Creek logging road, proposed to extend near park boundary;

Services, Campgrounds and Accommodation

- Mount Robson Motor Village; gas, food, souvenirs;
- 95 private campsites at Robson Shadows, Emperor Ridge and Robson Ranch campgrounds;
- motels in Tete Jaune Cache, Valemount, Jasper;
- Backcountry hut at headwaters of Dave Henry Creek;
- Application for hut on Swift Creek approved;
- Cabin on Swiftcurrent Creek (status and location unknown);

Viewpoints and Day Use Areas

- Rearguard Falls day use area;
- Mt. Terry Fox Viewpoint and Picnic Area on Hwy. 16;
- Mt. Terry Fox Viewpoint and Picnic Area on Hwy. 5;

8.3 RECREATION OPPORTUNITIES

Mount Robson Park includes a large and varied mountain landscape. Diverse recreation opportunities are linked to the mountainous terrain and superb wilderness qualities. Mount Robson Park is best known for Mount Robson and Berg Lake, its highway scenery, and backcountry recreation opportunities.

The following tables show the range of recreation activities in approximate order of importance. The tables show type of use and activities, and provide a short description along with where the activity is most common. Of the major types of recreation recognized by the Ministry of Parks, Mount Robson offers Day Use, Overnight Accommodation, Backcountry, Natural and Cultural Resource Appreciation, Snow Sports and Winter Recreation, and Water Sports.

Recreation opportunities are also summarized for Mt. Terry Fox, Rearguard Falls and lands immediately west of the park boundary. A commercial recreation plan is being prepared for lands west of Mt. Robson, by the Ministry of Crown Lands.

TABLE #5 RECREATION OPPORTUNITIES

TYPE OF USE	ACTIVITY	DESCRIPTION	AREA & TERRAIN
DAY USE	Short Walks	10-30 minute walks to viewpoints or along shorelines;	Overlander Falls, Fraser River, Mt. Robson Viewpoint, Yellowhead Lake, Labrador Tea Trail, Lucerne L., Portal Lake, Whitney Lake;
	Day Hikes	2-8 hour hikes on constructed trails;	Overlander Falls to Robson Ranch road, New Lookout Trail at Robson Viewpoint, if connected with Overlander Falls loop, Kinney Lake, Yellowhead Mountain, Mt. Fitzwilliam Trail;
	Picnicking	roadside tables, or picnic shelters at end of trail;	Mt. Robson Viewpoint, Kinney Lake shelter, Fraser Crossing picnic area, Yellowhead Lake, Yellowhead Pass, Portal Lake;
	Sightseeing/ Photography	park and view activity, very accessible;	Mainly along highway corridor;
	Wildlife Viewing	park and view activity;	Mainly along highway corridor; best at Moose Lake marsh, and on slopes below Emerald Ridge;
	Fishing	poor to fair success, access good on trails or by boat;	All highway corridor lakes; Sections of main rivers and streams; (See Fish, Section 2.4.2).
	Horse Riding	limited mainly to commercial parties, on well prepared trails;	Kinney Lake;
	Mountain Biking	service road to Kinney Lake is ideal, now possible to bike to White Falls, then hike up to Berg lake;	Kinney Lake, Mt. Fitzwilliam trail to Rockingham Creek;
	Heli-hiking/ or Heli-viewing	clients flown from Valemount or Robson Ranch; fly to Berg Lake and out, or land and hike out; heli-viewing on 20-30 min. flights;	Berg Lake, fly in, hike down;
		multi-day packages, fly-in;	Miette Pass.

NATURAL AND CULTURAL RESOURCE APPRECIATION	Nature Appreciation	participate in interpretive programs; read signs and other literature	highway corridor for day users; throughout park, backcountry travellers;
		wildflower appreciation, wildlife viewing; eg. birding, group events;	Kinney Lake Trail, alpine meadows, Moose Lake marsh, Emerald Ridge, Miette Pass;
	Culture Appreciation	participate in interpretive programs; read signs and other literature;	Robson information centre, Lucerne area, Yellowhead Pass;
	Photography	may be specific objective for many visitors; as individuals or in guided party;	throughout the park;
BACKCOUNTRY	Hiking/ Backpacking	overnight to multi-day trips, novice/intermediate skills on easier trails;	Berg Lake-Kinney Lake, Mt. Fitzwilliam, Fraser River (rough route), Moose River (rough route);
	Mountaineering	overnight to multi-day climbs; novice to expert routes; commercially guided & private parties;	Mainly in Mt. Robson area, and Ramparts, accessed from Jasper Park; Mt. Fitzwilliam area of less interest;
	Horse Riding	overnight to multi-day trips; on constructed trails and rough routes;	Berg Lake/ Kinney Lake, Moose River, (rough route), Fraser River, (rough route);
	Fishing	no destination opportunities, may try incidentally on other trips;	Moose River, upper Fraser River;
	Wildlife Viewing	most likely incidental to other activity such as hiking;	throughout park;
	Mountain Biking	limited opportunities;	White Falls/return;
	Caving	highly experienced cavers only, with self sufficient technical and rescue capability;	Arctymos Cave.

TYPE OF USE	ACTIVITY	DESCRIPTION	AREA & TERRAIN
WATER SPORTS	Boating	limited opportunities;	Moose and Yellowhead Lakes;
	Kayaking	limited day opportunity for experts only, Class IV-V water;	Fraser River;
	Rafting	limited opportunity for skilled rafters; class IV-V water;	Fraser River;
SNOW SPORTS AND WINTER RECREATION	Ski Touring	opportunities limited in some areas by avalanche hazard;	Kinney Lake/Berg Lake, Tonquin Pass, Dave Henry Creek;
	Ski Mountaineering	opportunities for skilled parties;	Robson Glacier area, Tonquin Pass, Mt. Fitzwilliam;
OVERNIGHT ACCOMMODATION	Camping	overnight and multi-night opportunities;	Robson Meadows, Robson River, Lucerne, Group Campground;
	Huts	climbing parties;	Ralph Forster Hut;
		hiking groups;	hikers in Tonquin Valley use A.C.C and commercial huts; in turn these clients may hike into Robson Park;
	Private Accommodation	outside the park, but in core area;	Robson Ranch, Robson Shadows Campground.

TABLE #6 MT. TERRY FOX AND REARGUARD FALLS RECREATION OPPORTUNITIES

TYPE OF USE	ACTIVITY	DESCRIPTION	AREA & TERRAIN
MT. TERRY FOX			
DAY USE	Extended Day Hiking	limited appeal, steep climb and length;	Trailhead from Hwy #5;
	Viewing/ Photography	accessible from parking lots;	Hwy #5 & #16;
REARGUARD FALLS			
DAY USE	Short Walks Viewing/ Photography	accessible from the parking lot;	To the falls, at the falls;
NATURAL AND CULTURAL RESOURCE APPRECIATION	Nature Appreciation Wildlife viewing		Montane forest; Salmon at falls

TABLE #7 RECREATION OPPORTUNITIES ON ADJACENT LANDS

TYPE OF USE	ACTIVITY	DESCRIPTION	AREA & TERRAIN
DAY USE	Hiking	dispersed use opportunities;	Swiftcurrent Creek, Alpine ridges along border, Lost Lake Trail;
	Heli-hiking	commercial opportunities based from Valemount or Robson Ranch;	Alpine ridges along park border and west;
	Hunting	dispersed hunting opportunities for goat, other ungulates;	all road accessible valleys; Swiftcurrent, Holmes, Ptarmigan Creeks;
	Fishing	limited potential for catch and release alpine lake fishery;	Dave Henry lake and other similar lakes;
BACKCOUNTRY	Hiking	dispersed use;	north of Yellowhead Highway in alpine terrain west of park;
	Horse Riding	dispersed use, access to Jasper park, commercial operations	Holmes Road to Bess or Jackpine Pass; served by huts on west boundary;
	Hunting	dispersed use north of Highway #16;	Holmes Creek valley, Small Creek valley, Ptarmigan Creek;
OVERNIGHT ACCOMMODATION	Huts	commercial operation;	Dave Henry Creek, Swift Creek (application approved);
	Motels	these facilities are an important part of the accommodation available to park users;	Tete Jaune Cache, Valemount, Jasper;
SNOW SPORTS AND WINTER RECREATION	Ski Touring	dispersed use;	Swiftcurrent Ck.;
	Snowmobiling	dispersed use;	Swiftcurrent Ck.;
	Heli-skiing	commercial opportunity;	areas under application.

Most park visitors stay in one of three main highway campgrounds, enjoying the woodland camping experience. Campground capacity and future visitor needs will be addressed in the management plan.

The many recreation pursuits available in Mount Robson Park include river rafting and kayaking. This commercially guided group is enjoying the Fraser River run below Rearguard Falls.

9.0 MARKET AND USE ANALYSIS

9.1 PARK USE

Mount Robson Park has a high profile in the British Columbia park system, yet is not as well known nationally or internationally as its sister national parks, Jasper and Banff. This visibility could be compared to the situation in Kootenay or Glacier-Revelstoke National Parks. Mount Robson itself is well known globally, in climbing circles. The Yellowhead Highway and the park's proximity to Jasper and Banff National Parks nevertheless guarantee an annual draw of several hundred thousand tourists.

The major categories of visitors include Highway 16 through traffic (vacationers en route or people on business), front and backcountry overnight users, day users, and destination travellers, including hikers and other backcountry travellers. The major attraction is Mount Robson itself. Winter users of the park include a limited number of cross-country skiers and ski mountaineers.

Ministry of Highways figures show that about 800,000 vehicles per year travel through the park on the Yellowhead Highway. Up to 300,000 of these stop in the park, most often at the Mount Robson visitor centre. Campground attendance for Mount Robson Park averages 12,000 parties annually, with day use attracting about 88,000 parties. The Visitor Centre records 28,000 visitor contacts yearly (many people who stop use the toilets only, or do not seek information).

The park has enough capacity to accommodate increased day, overnight, frontcountry and backcountry use. The Jasper National Park Management Plan (1988), predicts some increase in use during the next decade, possibly with an emphasis on demand for roofed accommodation. The demand for backcountry and vehicle campsite space will increase slowly, according to the Jasper Management Plan.

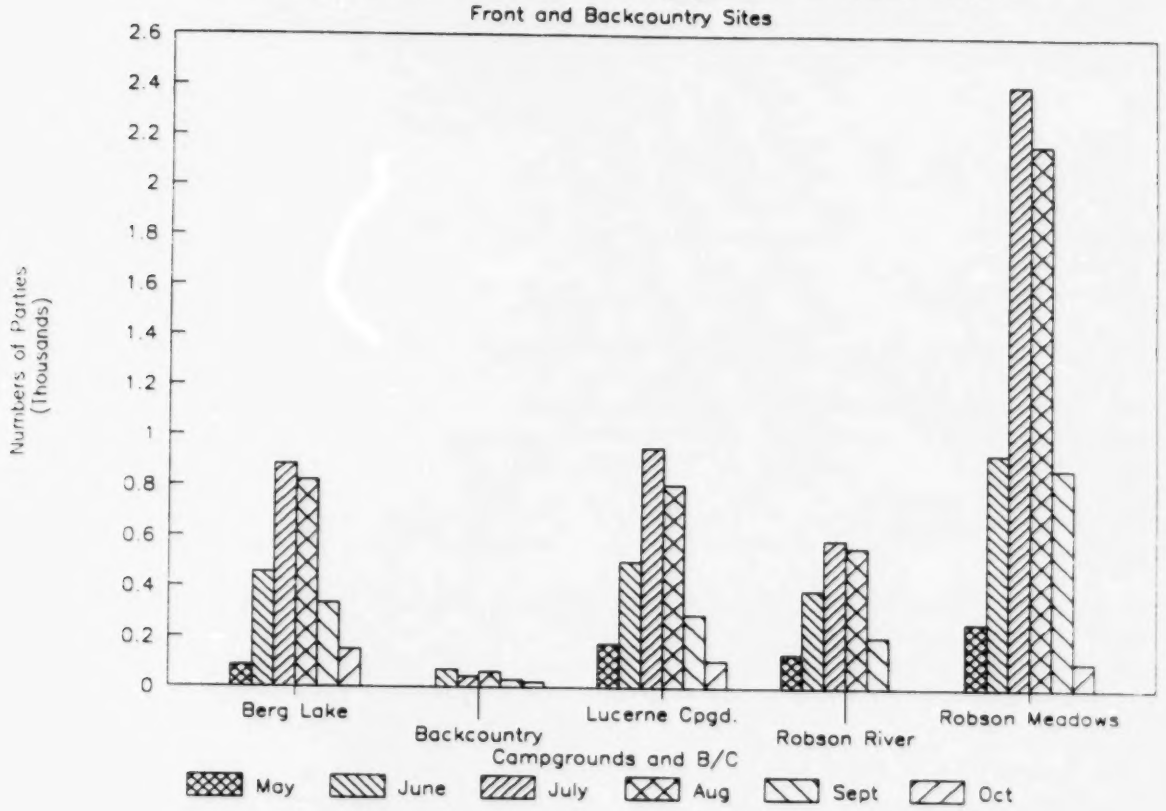
Overnight Use: Frontcountry

Family campers, making up the majority of visitors, stop in the park while travelling through the Yellowhead Pass. The length of stay pattern has remained about the same since 1975: 80% stay 1 night, 15% remain 2 nights, and 5% remain 3 nights or more (Gain et al, 1975).

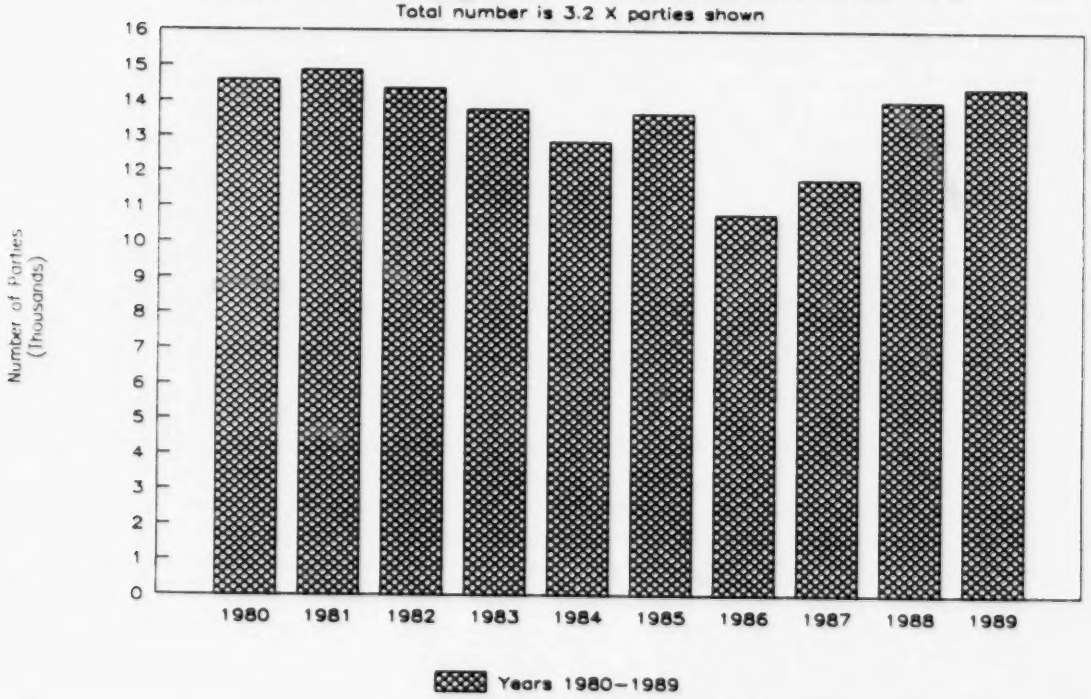
Visitors with schools, churches, tours, and outdoor recreation organizations are called group campers. Group campers comprise a relatively small percentage of overnight use. They stay at Robson Meadows Campground, Robson River Campground, and Lucerne Campground. The Yellowhead Lake Campground also serves occasionally as an additional group camping area. As well, 2 locations are designated group campgrounds: the Moose River Group Campground and the Kinney Lake Trail Group Campground.

The combined occupancy rate for the three highway campgrounds averages 60% from June to August. The peak season occupancy of Robson River Campground is over 90%, while the annual occupancy of Robson Meadows Campground is about 24%, with 40-45% occupancy during peak season. Additional campground capacity may be needed at the east end of the park, since Lucerne Campground is used at near 100% capacity, partially due to spillover from Jasper National Park. Graph #1 shows seasonal campground occupancy in 1989. Graph #2 shows that campground use since 1980 has increased in the last three years, but is just now reaching the level of 1981 use at about 13,000-15,000 parties annually.

Graph 1: Seasonal Campground Use, 1989



Graph 2: Campground Attendance 1980-89



Overnight and Day Use: Back-country

Berg Lake Trail.

Backcountry use is concentrated in the Berg Lake area. Berg Lake is used from May through October, with July and August the peak months. This popular hiking, horseback riding and more recently, mountain biking trail is one of the premier routes of the Rocky Mountain parks. About 11,400 visitors per year camp at Berg Lake, with 250 climbing parties, 80 riding parties and 60 parties on extended trips. This is an occupancy rate of about 50% for the 80 sites. The Berg Lake area could physically accommodate up to 35,000 camper nights, although the environmental effects of such use levels have not been studied.

For those interested in leaving the Robson Viewpoint area, the Berg and/or Kinney Lakes are destinations of choice. Recent improvement to the trail has reduced the hiking time to Berg Lake; as a result, hiking use (particularly family hiking) of the trail has increased. In the meantime, horseback use on the Berg Lake trail has declined dramatically. Horseback rider/hiker/mountain biker conflicts due to safety questions, environmental impacts, and user expectations are a management concern on the Berg Lake-Kinney Lake trail.

Back-country campers at Berg Lake consist of hikers, photographers, mountain climbers, riders, and cross-country skiers. Park rangers suggest that the majority of hikers have novice or intermediate skills, while many climbers in the area would be highly skilled. In 1975, Gain, Swanky and Taylor found that:

- 65% of the backcountry campers travel with 1 other person;
- 25% travel with 2 or 3 other people;
- 85% of the campers remained 2 or more nights (with an average of 3);
- 62% identified their main activity as hiking;
- 14% were photographers;
- 9% were climbing.

Out of the total number of people reaching the Berg Lake Chalet, 69 percent continued on to Adolphus Lake, 23 percent to the Robson Glacier-Snowbird Pass area, 15 percent to Extinguisher Tower - Mt. Robson Peak area, and 9 percent to the Toboggan Falls-Mumm Peak area. Since improvement to the Snowbird Pass trail, completion of the Hargreaves Lake Trail, and the treeline loop trail above Berg Lake, these proportions have changed, but the figures still provide a good picture of overall use patterns. Shorter hikes may now be preferred by family or novice groups, since trail improvement has made Berg Lake more accessible.

Winter use levels on the Berg Lake trail are not known but some adventurous parties ski up to the chalet each year. The trail to Kinney Lake is popular with local skiers who take advantage of the warming shelters located at both the trailhead and the lake. The "near-wilderness" atmosphere associated with Kinney Lake make it a very attractive destination. Avalanche slopes are a winter safety hazard on the Berg and Kinney Lakes trails.

Since the trail improvement and the advent of mountain biking, day use of the Berg Lake area has become possible and is likely a significant portion of overall use. It is feasible for fit individuals with light day packs to hike to the Berg Lake vicinity and back in 9-10 hours, and using a bike/hike combination, in 7-8 hours. Most people with overnight packs take 7-9 hours for the trip in. In 1989, up to 16,000 people hiked, biked, or even ran the lower end of the trail to Kinney Lake, although no figures are available for how many got to Berg Lake on day trips. Backcountry day travel has also been promoted with the use of helicopters to drop off passengers in the Berg Lake area. These visitors then hike out in 4-7 hours. Hikers frequently mention the noise and intrusion created by helicopter use (Park Rangers, pers. comm.).

Back-country group campers may be people organized by local outfitters and special interest groups (Alpine Club of Canada, schools, outdoor recreation groups, etc.). School groups hold the greatest number of group camps in a normal year, with horse-back riders organized by local outfitters comprising a smaller percentage. School groups use the park mainly in June, during the school year. Party size ranges from 10-15.

Other Backcountry Trails

Use of the Moose and Fraser River trails is limited to those seeking a week or more of hiking or riding in a wilderness with no facilities. These routes may be used to connect to Jasper National Park, for example to Smokey River or Amethyst Lakes. In 1989, a total of 223 parties, or about 500-600 people, registered for backcountry use, outside of the Berg Lake area. Backcountry travel started in June and extended to October. During the peak season of June-August there were about 100-150 people at any given time in the Mount Robson backcountry, outside of the Berg Lake area. About 450 people per year use these trails as shorter day use trips.

Since the trail improvements to Mt. Fitzwilliams, use of this area will likely increase, but is still far below capacity.

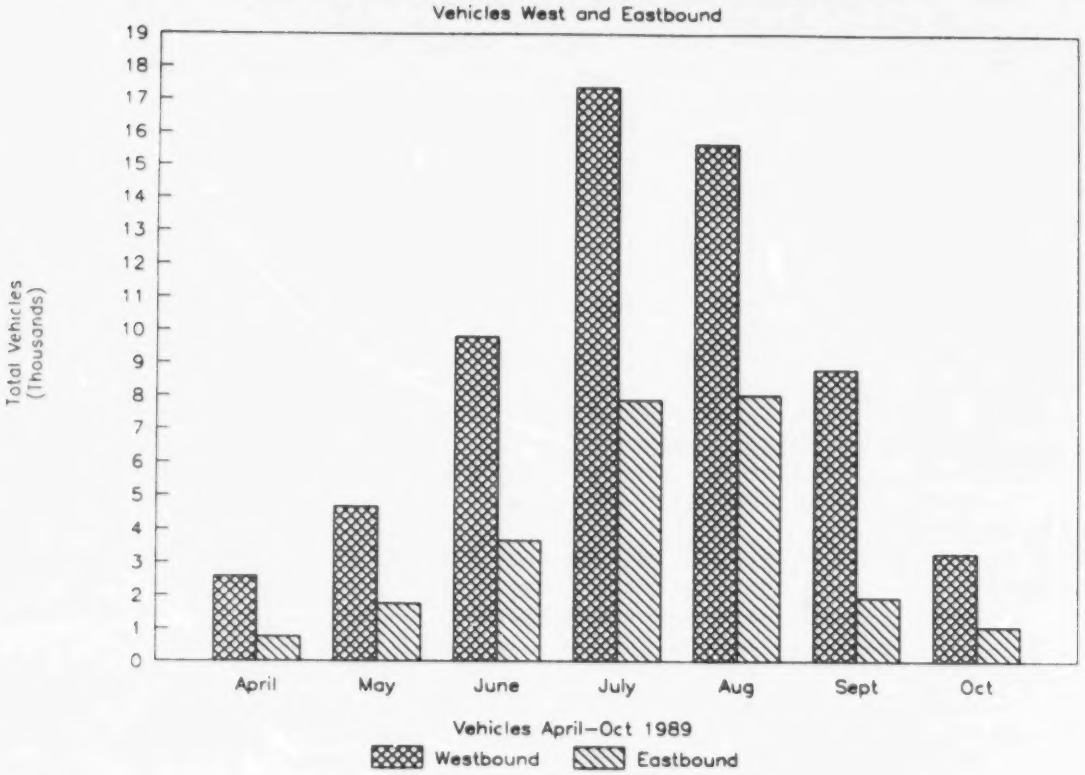
Day-Use

Day users include those passing through the park by train, Highway 16 through traffic, or vacationers en route elsewhere who may camp a night and then engage in day use activities. Local people from Jasper, Valemount, McBride and region also use the park on a day use basis. Day users engage in sightseeing, Picnicking, fishing, hiking, mountain biking, nature observation, interpretation activities, birding or photography.

The main Mt. Robson viewpoint has about 300,000 visitor days per year, with Rearguard Falls (outside the park) at 12,000-15,000 and Overlander Falls, 1,000. The main Robson viewpoint centre operates at about 50% capacity. Graph #3 shows the total number of vehicles stopping at the visitor centre by month. The graph also shows that the number of westbound vehicles is more than double the eastbound traffic.

Train traffic day-users travel through the park on Canadian National or Via Railways and appreciate the scenery. These people have minimum first-hand experience with the park and its facilities. Highway 16 through traffic day-users travel the Yellowhead Route in the park without stopping or perhaps making one quick stop to use the park facilities (i.e. toilet).

Graph 3: Visitor Centre Parking, 1989



Sightseers are usually family groups on holidays, spending more time in the park than the previous groups. These picnickers, photographers, hikers, fishermen and others spend some time in the park to appreciate its natural, historical and recreational resources. Most sightseers are attracted to the Mt. Robson Viewpoint by the Information Centre (operated in conjunction with B.C. Tourism), park facilities (picnic tables, water, toilets, services nearby) and the view of Mt. Robson. The largest number of viewpoint day-users are people in private vehicles that wish to use the available facilities. Also included in this group are the great number of people visiting the park in organized bus tours. Many of these visitors are from German or French speaking countries and may not be fluent in English. In 1989 an estimated 301,231 people passed through the Mt. Robson Viewpoint (Table #8).

There are vehicle counters installed at the eastern entrance to the park at the information pullout, as well as at the pullout area for Rearguard Falls. The following vehicle count is from Mount Robson Provincial Park records. An "e" indicates that the figure is an estimate. The April 1989 figure is only for April 18th to 30th, while the March 1988 number is only for March 10th to 31st (Table #8).

Fishermen are also day-users. They travel through the park in one day, but may spend considerable time hiking and angling. Day-use areas such as Yellowhead Lake, Moose Lake, or Portal Lake may be starting points for their pursuits. Local people frequently fish in the park, particularly before or after peak tourist season.

Table #8 Vehicles Stopping at Points of Interest

East Portal (vehicles)

Year	Mar	Apr	May	June	July	Aug	Sept	Oct
1989		672	2,003	2,793	4,323	3,863	2,547	1,485
1988	311	680e	2,046e	3,300e	4,340e	4,030e	2,100e	

Rearguard Falls (vehicles)

Year	Mar	Apr	May	June	July	Aug	Sept	Oct
1989		929	1,287	2,352	3,744	4,400	2,765	808
1988	323	639	1,160	2,321	3,885	5,018	3,122	

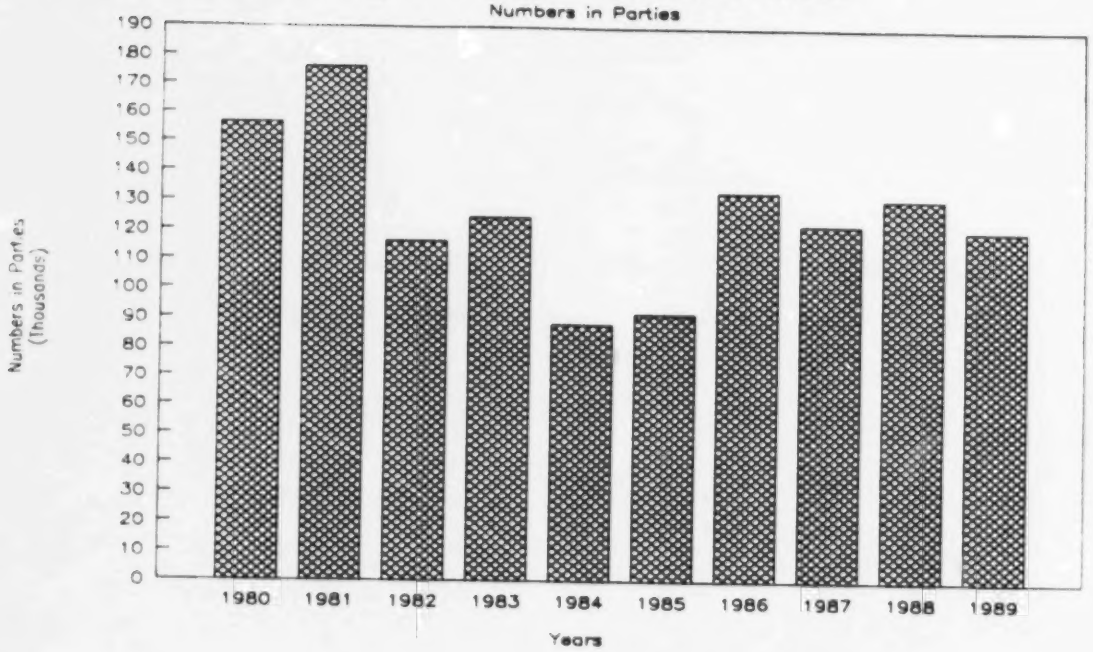
Day Hikers and Mountain Bikers use the parks shorter routes such as the Kinney Lake trail, Overlander Falls, or in future the newly constructed Robson Viewpoint loop trail. These users may be passing through the park in one day or may have camped in the park to engage in day activities before or after their overnight stay. In 1989, about 16,000 people hiked or rode the Kinney Lake/Berg Lake route as a day activity. About 450 visitors are known to have hiked the remaining backcountry trails, such as the Yellowhead Mt trail, as a day activity. Figures for the short viewpoint trails are not available.

Heli-sightseers and heli-hikers are day users who fly from either Valemount or Robson Ranch up the Valley of a Thousand Falls to Berg Lake. Some get out at Berg Lake and hike down the valley. Short trips are arranged from Valemount, with some departures from Robson Ranch.

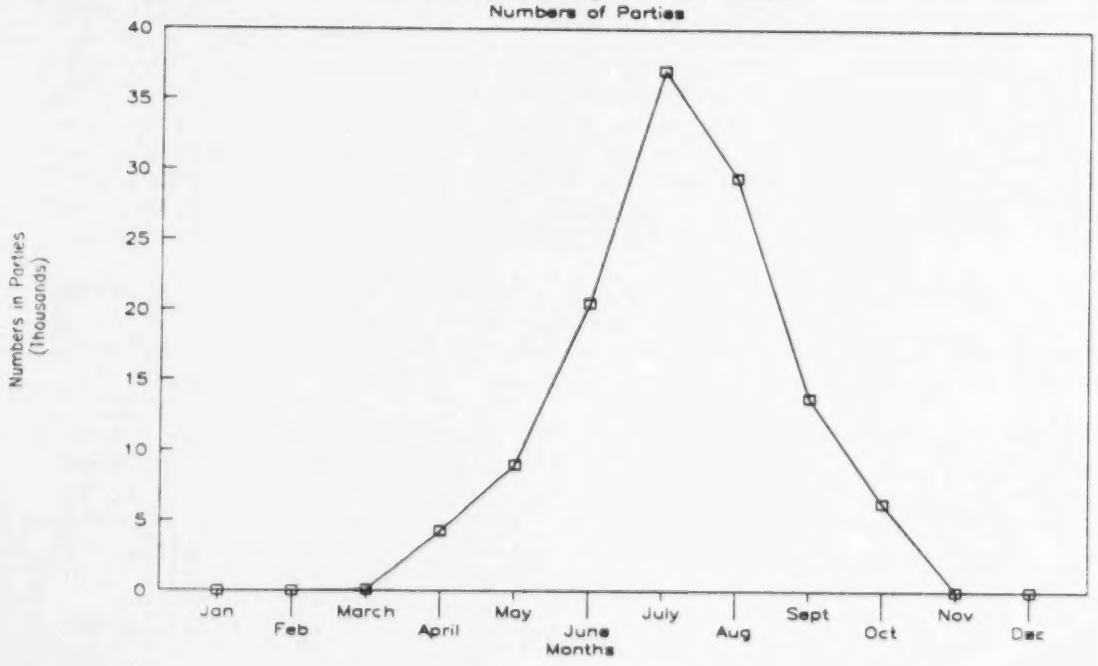
Day use between 1980 and 1989 by all types of users is shown in Graph #4. The graph shows a decline since 1981, but measuring day use is not always accurate, and these numbers should be used cautiously. The definition of day use is also a problem, since it is known that 300,000 people passed through the Visitor Centre in 1989.

Seasonal day use attendance is shown in Graph #5 Figures are given as the number of parties. The number of parties must be multiplied by 3.5 to calculate the estimated number of day use visitors.

Graph 4: Day Use, 1980-1989



Graph 5: Day Use, 1989



9.2 VISITOR ORIGINS, MODE OF TRAVEL

Visitor Origins

Visitors to Mount Robson Park are local or regional residents (Jasper, Valemount), B.C. or Alberta residents (Edmonton, Vancouver) visitors from the rest of Canada (Saskatchewan and points east), from the United States, and overseas visitors. Tourists are often defined as people travelling more than 80-100km to a destination. Except for residents of Jasper and the McBride/Valemount area, all visitors to Mount Robson could be called tourists.

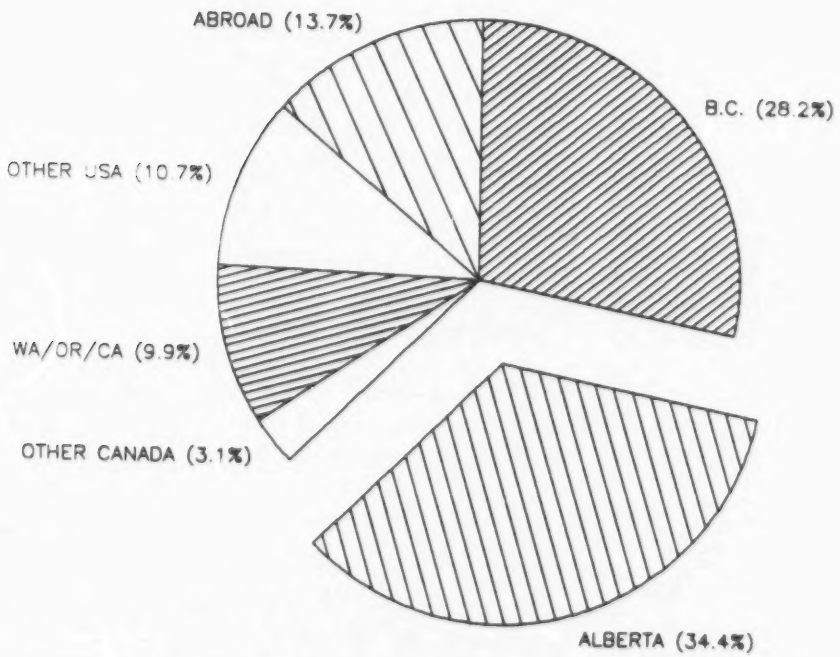
Residents within 100 kilometers of the park boundary include full or part-time residents of McBride, Dunster, Croydon, Tete Jaune, Valemount, Blue River, Jasper and Hinton, Alberta. These people likely use the park often, for either day or overnight use. Regional visitors would include those from Prince George or Kamloops. Many visitors are from Alberta.

In the park as a whole, Alberta residents are the most prevalent visitors at 35-50% of the total. Visitors from the United States and British Columbia who engage in backcountry camping and hiking make up about 25% of the total visitors. British Columbia residents who use the campgrounds comprise 35% of the total, while Americans account for 10%. Other Canadians and foreigners make up less than 10% of total park use. As shown in Graph #3 above, more than 50% of the visitors to Mount Robson are travelling west. Many of these are from Alberta destined for Mount Robson, or from the United States, destined for Alaska.

Graph #6 shows the origin of visitors to Robson Meadows campground in 1988. The figures are similar to those of the other two campgrounds.(Adapted from 1988 Visitor Satisfaction Survey)

Graph 6: Visitor Origins

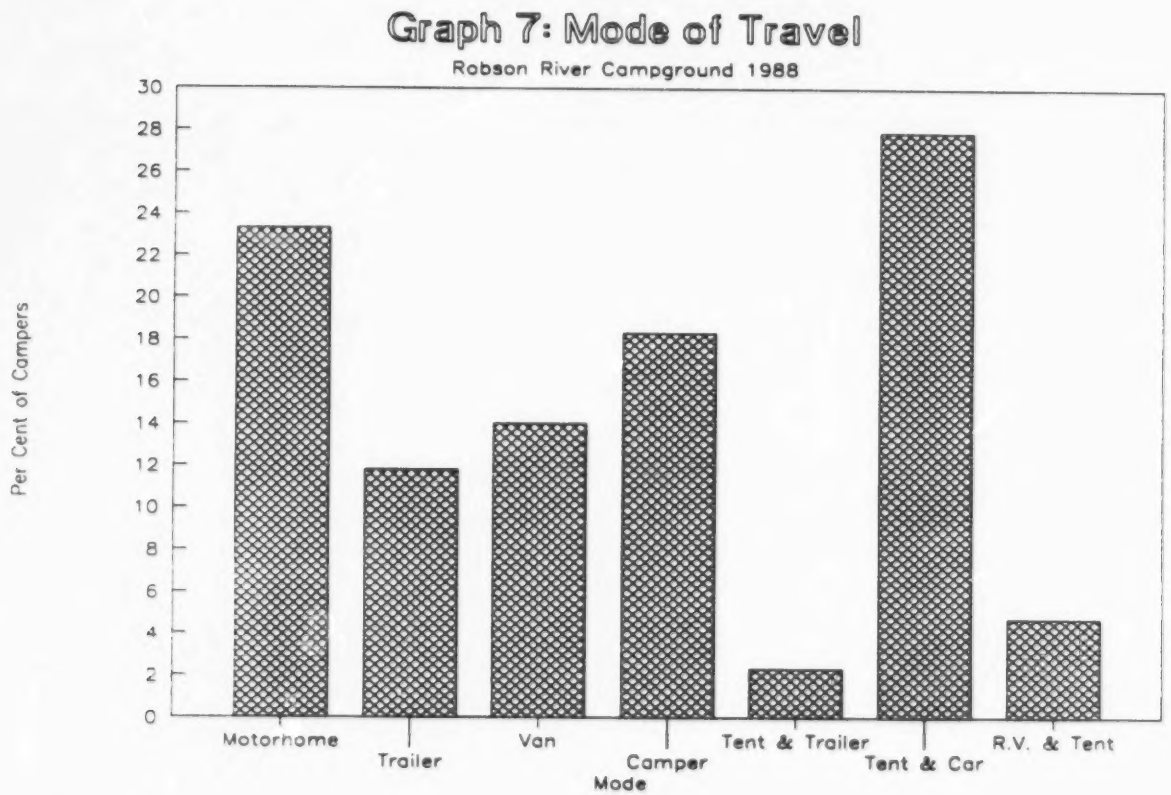
Robson Meadows Campground



Seventeen tour bus companies stop at the Visitor Centre in Mount Robson Park. These companies mainly originate from the Pacific Northwest and Alberta, although tours from the eastern parts of Canada and the United States are not uncommon.

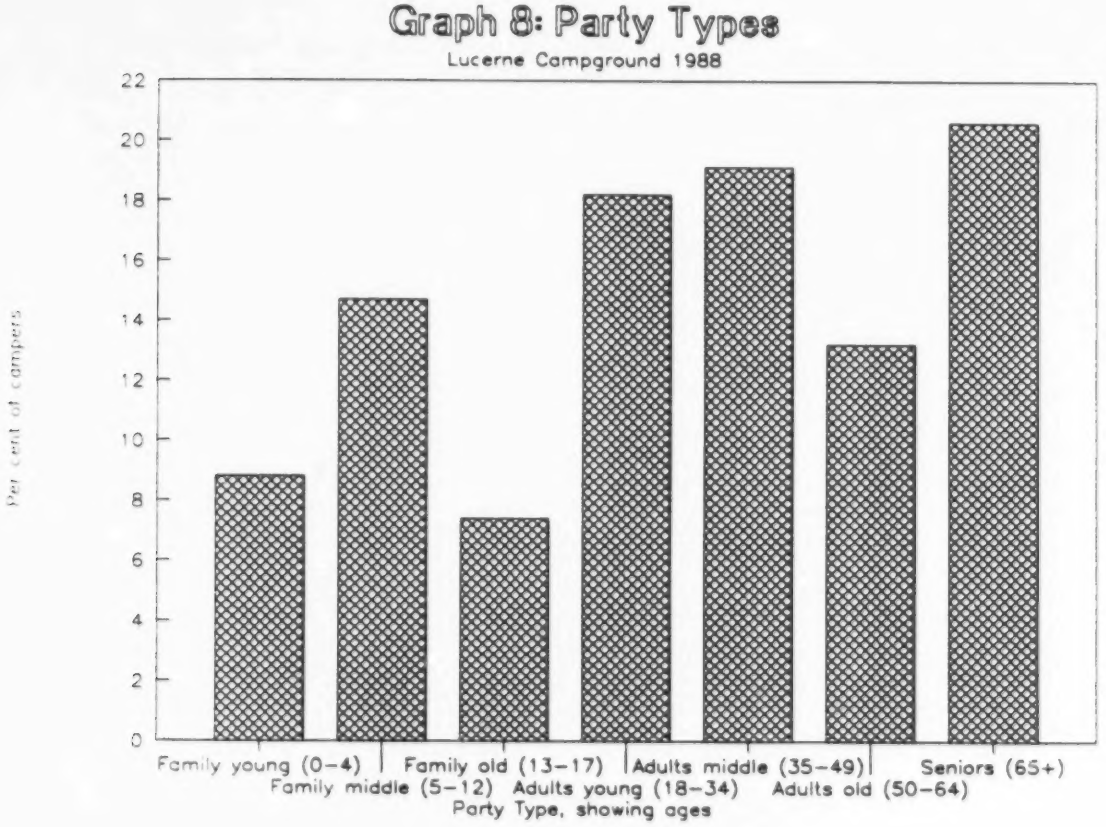
Mode of Travel

Most visitors to Mount Robson campgrounds arrive with recreational vehicles such as motor homes, trailers, or camper trucks. About 20% use cars and tents and 14% of all the visitors to Mount Robson arrive by bus. Graph #7 shows the mode of travel and accommodation used by campground visitors at Robson River. These figures are fairly typical of all three park campgrounds (Adapted from 1988 Visitor Satisfaction Survey):



9.3 VISITOR PROFILE

The 1988 Visitor Satisfaction Survey provides data on typical party types at Mount Robson campgrounds. Graph #8 shows party types at Lucerne Campground, and reflects overall campground use:



Visitors to Mount Robson are from diverse areas and backgrounds, yet many share common characteristics. Table #9 shows a profile of typical frontcountry visitors. This profile is a composite of information from park use statistics and satisfaction surveys:

Table #9 Mount Robson Park Visitor Profile

Origins and Planning

- most often are first time users of park,
- from Edmonton or Calgary in Alberta, all parts of B.C.,
- American on extended vacation, trip planned well in advance,
- aware of the park because of its proximity to Banff and Jasper,
- travelling in a family group, average size 3.0 people
- travelling in R.V.'s, or camper trucks;

Age and Occupation

- in younger family group if from Alberta or B.C.,
- retired, if an American on vacation,
- largest percentage of parties travelling in adult groups of two;

Destination

- if from Alberta or B.C., then Mount Robson Park likely the destination, or major part of trip,
- if American, then likely travelling to Alaska, or on Alberta/B.C. tour,
- twice as likely to have come from Jasper, as from points west;

Activities and Interests

- if camping, then majority will stay one night,
- interested in the scenery and wilderness,
- interested in things to see and do, particularly short walks,
- amateur photographers,
- want information, prefer personal contact with staff,
- generally satisfied with the trip and consider coming back to see and do more, or at least recommend trip to others,
- if a backpacker on Berg Lake trail, then likely with novice or intermediate skills,
- if a climber, then likely with intermediate to expert skills.

9.4 EXISTING INFORMATION

Information about Mount Robson Park and interpretation of its resources is available at:

Off-site Information Centres

McBride, Valemount, Jasper and larger centres,
Various Commercial Visitor Guides;

Park Visitor Centre

This building has many different uses. Several separate types of information are presented in one room: where to go in B.C., a pictorial sketch of park heritage and resources, a park relief map, and information on trails and travel. A multi-purpose focus means that some visitors may depart without a strong message about Mount Robson Park itself. Many do not notice the park display, while others appear uncertain about the three dimensional guide to provincial parks and features.

The building functions include:

B.C. Parks System promotional display, B.C. tourism information,
Mt. Robson historical and natural history interpretive display,
Trail maps and information, fishing information,
Indoor and outdoor theatre for interpretive programs,
Toilets,
Park Offices;

Campground Information Boards

Campground Information,
Fishing information,
Hiking information,
Bear Hazard Notices,
Information on nearby nature walks;

Viewpoint Signs and Interpretive Signs

Park interpretive signs are clear and well situated at all pull-outs. Interpretive information, promotion of hiking routes and other park activities, are displayed on maps with supporting text and photos.

Trailhead Signs

Route maps, interpretive information,
Safety and regulation postings;

Park Interpretive Programs

Park interpretive programs include naturalist programs such as slide shows, guided walks, and special events. Interpretive signs are found at viewpoints, trailheads and on trails. Brochures and handouts describe flora, fauna and cultural heritage. In summary the interpretive program includes:

Naturalist walks and talks at Visitor Centre,
Group events such as bird counts,
Interpretive Signs on Trails, such as plant identification signs,
Moose Lake Marsh wildlife viewing, proposed in future, trails and signs;

Maps and Brochure

Several maps, brochures and information sheets are available, including:

Provincial Parks of Northern British Columbia Road Map,
Park map and general information brochure,
Park pocket guide and promotion (post card format),
Berg Lake Trail Information,
Park Topographic Map, 1:125,000 scale.

Participation

Table #10 shows interpretation program attendance figures. The figure for June 1989 is only for the 16th to 30th, while the June 1988 figure is for the 15th to 30th . The figure for Sept 1988 is only for the 1st to 5th. The figure for September 1989 is only for the 1st to 4th.

Table #10 Interpretation Attendance (in contacts)

Year	Total	June	July	Aug	Sept
1989	37,117	4,176	15,457	15,691	1,793
1988	36,707	3,819	13,837	17,516	1,535
1987	n/a				
1986	25,649	3,421	12,501	9,727	-
1985	29,085	4,611	13,963	10,511	-
1984	28,275	2,928	12,151	12,598	598
1983	35,154	2,729	14,953	15,365	1,107
1982	43,402	4,219	23,729	14,482	972
1981	47,673	2,207	23,969	20,828	669
1980	20,263	2,501	10,543	7,219	-

These figures support the expectation that more travellers will want to learn about the natural environment and cultural heritage they are experiencing. The peak years of 1981-82 coincide with higher day and campground use in the park.

9.5 VISITOR SATISFACTION

1988 visitor satisfaction surveys for the Mount Robson campground users show a high score for facilities and services. The three campgrounds of Robson Meadows, Robson River and Lucerne were surveyed. More than 65% of Robson Meadows visitors ranked restrooms, cleanliness, roads, information, noise control, and other services as excellent or above average, while 31% of the remaining respondents ranked these factors as average. Availability of firewood was cited as a problem by 14% of visitors, while the value for the campground fee rated below other facility scores. These scores generally reflect the responses from other campgrounds, although each site had its own strengths and weaknesses in the eyes of visitors.

Satisfaction scores in Mount Robson are comparable with other parks in the Northern Region and with all B.C. parks. Robson Meadows satisfaction scores for cleanliness of restrooms, availability of firewood and value for the fee were below the regional average, while availability of park information and variety of recreation activities were rated above the regional average. Other campgrounds in the park had better overall ratings .

The large majority of previous park users felt that management was the same or better than in 1987.

Backcountry users in Mount Robson Park were not surveyed in 1987 or 1988. Personal communication with park rangers at Berg Lake suggests a high level of visitor satisfaction, although many comments on helicopter noise have been received.

9.6 MARKET POTENTIAL

Traffic through Robson Park will increase gradually, reflecting trends in highway use, population growth, and participation patterns in outdoor recreation. The completion of the Coquihalla Highway has resulted in easier access to Kamloops and the Yellowhead Highway. It remains to be seen whether this contributes to greater park use in the future. The 1992 Alaska Highway 50th Anniversary will attract more Alaska-bound travellers, but most will pass through the park on the their way west and north.

The demand for guided adventure activities such as rafting will likely increase according to provincial trends. Limited potential for commercial day use rafting exists on the Fraser River. The demand for wildlife viewing will continue to increase, and facilities provided in Robson will likely be well used. Most provincial visitor surveys show that interpretation activities, information, and short hikes, will be in demand for the foreseeable future. If helicopter access is permitted to backcountry areas for heli-hiking, this type of use will also likely increase, following provincial trends.

Backcountry use has declined or leveled off in the national parks, yet the provision of roofed backcountry accommodation will maintain a strong demand for so-called 'soft' adventure. In Robson Park, the improvement of the Berg Lake trail, and the provision of shelters en route has made the backcountry more accessible to the novice-intermediate market. The demand for this type of experience will likely increase, particularly for families. The demand for permits to operate guided activities and services may well increase concurrently with the growth of 'soft' adventure.

Horse use in the park has declined in recent years, with designated routes not used to capacity. Demand for horse travel has not increased dramatically in the province, but maintains a steady portion of the outdoor recreation market. Greater horse use in the park, perhaps in half/day

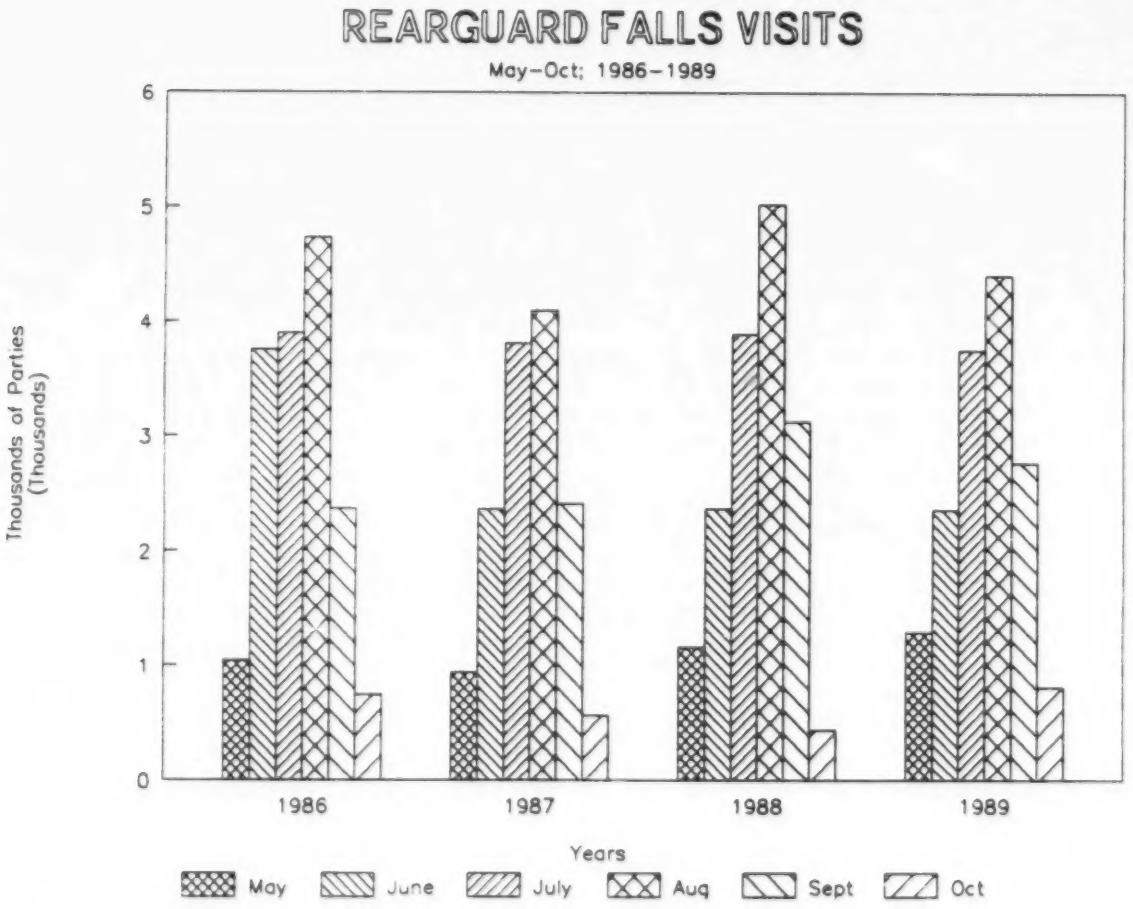
or day trips in addition to the extended wilderness trips, could be achieved with marketing. Market potential is partially limited by conflicts with other park users, and impacts on trails.

9.7 USE OF AREAS ADJACENT TO THE PARK, MT. TERRY FOX, REARGUARD FALLS

Most traditional recreational use west of Mount Robson is by local or regional residents, pursuing hiking, skiing, snowmobiling and other activities in the Premier and Selwyn Range. Heli-hiking and heli-sight seeing for tourists is offered commercially to the west of Mount Robson Park. Heli-skiing is popular throughout the region, serving an international clientele.

About 20,0000 vehicles stop at the Mt. Terry Fox viewpoint on Hwy #16, with fewer at the Hwy. #5 stop. Many people use the toilet facilities, although fewer use the picnic tables. The trail to Mt. Terry Fox receives little use, likely due to the deteriorating condition of the trail, and the more attractive and well promoted routes in Mount Robson Park. The trip requires 4 hours to the summit and a full day for a round trip. Many parties may get part way up the trail.

About 15,000 vehicles per year stop at Rearguard Falls. Most people walk to one of the two viewpoints, spending perhaps twenty minutes to an hour in the area. Graph #9 shows the seasonal use of Rearguard Falls from 1986-1989. This pattern is likely reflected at Mt. Terry Fox.



Use of lands adjacent to Mount Robson Park is dispersed along the western boundary, although commercial huts at Dave Henry Creek and Swift Creek, will result in more concentrated use along the Selwyn Range. Swiftcurrent Creek and Lost Lake are easily accessible and likely receive the heaviest use of areas near the park. About 1,000 visitors per year use the Tonquin Valley, and about the same number use parts of the North Boundary trail (far fewer would travel as far as Robson) in Jasper, both of which connect to Robson Park.

Mountaineering is a popular recreation activity in Mount Robson Park, and along the park border with Jasper National Park.

10.0 PLANNING ISSUES

Planning issues will be addressed in the Master Plan. Resolution of these issues will ensure that the dual conservation and recreation objectives for park management are met. The planning issues outlined in this report were researched and identified by park staff. A separate issues paper, distributed with this background report, expands on the topics. The public may identify further planning issues and suggest ways to deal with them during the public review .

Helicopter Access

One helicopter company operates under permit in the park, taking nordic skiers, hikers, campers, sightseers and climbers to the Berg Lake area. Helicopter access in Mount Robson Park will be assessed in relation to conflicts with other users of the park, surrounding land uses, wildlife and the fragile alpine landscapes. Decisions on helicopter use on the park will be made.

Mountain Bike Access

Mountain biking is allowed in some areas of the park. This popular recreation activity may have negative effects on hikers, horse riders and the park's vegetation. Management guidelines are needed for mountain biking.

Zoning

Zoning will be used to reinforce decisions on all park uses, including helicopter access, protection of wilderness areas, and facility developments. Zoning will help reduce conflicts between different types of backcountry users.

Public Promotion on Park Use and Management

A strategy for informing the public about bear saftey, garbage control, firewood conservation and other park management topics will be developed. The protection of water quality and alpine meadows in high use areas such as Berg Lake could be part of this information. Informing the public about these concerns will support park management efforts.

Park Boundaries

The park boundary needs to be assessed to determine if and where it should be expanded. Decisions on park additions will be made with reference to:

- protection of visual qualities of the highway corridor west of the park,
- protection of wildlife habitats important to park species,
- protection of scenic areas viewed from within the park,
- minimizing impacts from planned logging near the park,
- providing additional areas fro outdoor recreation,
- protection of ecologically significant and sensitive areas.

Forest Management

Insect infested areas have been selectively removed from the park in an effort to stop the eastward spread of infestations. This management activity will be reviewed to determine if it should be continued. Ways to manage the visual and environmental impacts of logging and access roads adjacent to the park boundaries will be studied.

Trans-boundary Trail Management

Numerous trails cross the boundary between Jasper National Park and Robson Park. The plan will guide cooperative trans-boundary trail management.

Horse Use

Horse use is allowed in some areas of the park. Management guidelines will be developed for this activity so that conflicts with other users, and impacts on the park's sensitive landscapes are minimized.

Fish Management

Fishing plays a minor role in the park. The plan will provide direction for either managing the existing fishery as it is, or enhancing it.

Wildlife Management

Wildlife are particularly vulnerable to being killed from highway traffic, trains, and poachers within the highway corridor. The plan will address the need to protect wildlife within the corridor.

Commercial Recreation

Commercial recreation services are in demand. Services include guided hiking and horse trips, river rafting and helicopter trips. The plan will provide direction on how many, and what types of services are compatible with the park.

Accommodation Facilities

Some commercial lodge facilities are located in the highway corridor. The plan will determine if more lodge development could be accommodated without compromising recreation and conservation objectives in the park.

Park Promotion

The plan will guide how the park will be packaged and promoted.

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APPENDIX

Encumbrances:

Mineral Claims: none
Leases: none
Foreshore leases: none
Forest Tenure: Not applicable to Provincial Parks
Air Navigation Orders: No Landing or Take-Off of aircraft within the Park; Ministry of Transport; Series V, Number 10.
Trapping Territory: Mr. A.J. Huble, Valemount, B.C. (PUP 539)
Guide-Outfitting Territory: None

Commercial Recreation Guiding:.

Mr. G.A. Cochrane; PUP 675; Swiftcurrent Creek, Robson River, Moose River

Mr. C.Harris; Pathways Adventure Co.; PUP 1331; MOunt Robson Park

Headwaters Outfitting; PUP 1331; Park area south of Moose Lake, including emerald ridge and The Comb.

Mt.Robson Adventure Holidays; PUP 1008; Mount Robson Park.

Yamnuska Mountain School; PUP 1547; MOunt Robson Park.

Water Rights:

C.N. Railway; F.L. 4992 and C.L. 59157
Trans Mountain Pipeline; F.L. 42083
Thomas F. Carr; B.L. 42595
Mount Robson Park; F.L. 21535; C.L. 47868; C.L. 49647

Inholdings:

Eight parcels of land within the park are held in fee simple ownership by :

Trans Mountain Oil Pipeline ROW;

i) Lot 1 of D.L. 5662, Cariboo District Plan 17209
ii) Lot 3727, Cariboo District

Canadian National Railway; (formerly Grand U" Pacific)

i) Lot 3736, Cariboo District, Plan C.G. 122
ii) Lot 3743, Cariboo District, Plan C.G. 122
iii) Lot 3745, Cariboo District, Plan C.G. 126
iv) Lot 10017, Cariboo District
v) Lot 10018, Cariboo District
vi) Lot 12650, Cariboo District, Plan 18869

Park Use Permits:

#	Use or Area
71	cabin and dock, Yellowhead Lake
144	railway right-of-way
275	cabin near Mt. Fitzwilliam
288	cabin and dock, Yellowhead Lake
539	trapping and cabins
554	water pipeline
675	guided trail riding
693	access to water control structure
721	Jasper Warden shed and corral
765	powerline
864	repeater station
962	pipeline right-of-way
967	repeater station
988	snow course
1008	commercial guiding
1051	railway right-of-way
1112	gravel pits
1119	railway right-of-way
1127	recreation guiding
1130	waterline and pumphouse
1137	access roads
1158	railway rights-of-way
1170	railway right-of-way
1213	helicopter transportation
1312	commercial guiding
1331	commercial guiding
1339	forest access road
1610	commercial guiding and camp

Rights-of-way:

Canadian National Railway

i) Main-line R/W (see Schedule on 'Green File")

ii) R/W Wye Track; D.L. 3745

iii) Access Roads

iv) Waterline R/W

v) Extra Railway R/W (related to Twin-tracking) Trans Mountain Oil Pipeline Company

i) Main R/W Easement; Plans 1,2,3,4, T432; Plan 29889 ii) R/W Easement; Plan 20925

Road Rights-of-Way

i) Yellowhead Highway R/W; (see "Green File")
ii) Moose River Pit Road
iii) Kinney Lake Road R/W
iv) Hargreaves Road R/W
v) Ministry of Forests Road R/W; Swiftcurrent Creek Power Lines